

2009 Texas A&M University Combined Research and Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

Texas is the second largest state in the nation with approximately 25 million citizens. The size and scope of Texas poses unique challenges with a wide range of diversity including both the agricultural and human sectors. The issues and needs of Texans vary by numerous factors and, in many cases, are complex. Texas is one of the most rural and most urban states in the nation with a majority of its citizens living in 20 of the 254 counties in the state.

Texas AgriLife Research and the Texas AgriLife Extension Service are the land grant research and Extension components of the Texas A&M System and are headquartered in College Station, Texas. Since its beginning in 1876 as a land grant institution, Texas A&M University has been a recognized leader in agriculture, food, and natural resources. Today, Texas A&M University, Texas AgriLife Research (AgriLife Research), and the Texas AgriLife Extension Service (AgriLife Extension) continue this legacy through outstanding academic programs, important contributions to science through research and discovery, and lifelong learning and youth development through Extension programs. The work of both AgriLife Research and AgriLife Extension is guided by strategic plans and roadmaps.

The Science Roadmap, developed by AgriLife Research, is designed to enable AgriLife Research to focus its resources on issues of highest importance as identified by agency scientists and other stakeholders. The goals of the Science Roadmap are vital and equally important to ensuring a positive future for Texas and its citizens. The goals of the Science Roadmap include: 1) Sustain healthy ecosystems and conserve our natural resources. 2) Enhance competitiveness and prosperity of urban and rural agricultural industries. 3) Improve public health and well being.

The Extension Roadmap, developed by AgriLife Extension, is designed to enable the dissemination of research based information to the citizens of Texas on issues of importance as identified through grassroots and other stakeholder input processes. This information is intended to allow the citizens of Texas to make sound decisions that will improve the overall quality of life for themselves and all Texans. The goals of the Extension Roadmap are: 1) Ensure a sustainable, profitable, and competitive food and fiber system in Texas. 2) Enhance natural resource conservation and management. 3) Build local capacity for economic development in Texas communities. 4) Improve the health, nutrition, safety, and economic security of Texas families. 5) Prepare Texas youth to be productive, positive, and equipped with life skills for the future. 6) Expand access to Extension education and knowledge resources.

Work on issues of importance in the state is a joint endeavor by both AgriLife Research and AgriLife Extension. Research based information is translated to practical best management practices and disseminated via multiple channels including the network of agents in all 254 counties in the state. Identification of issues and needs is conducted at multiple levels by both AgriLife Research and AgriLife Extension. Grassroots involvement by citizens, advisory groups, and commodity and industry groups are just a few of the ways this information is generated. Work with other states on areas of shared interest is also of high priority. Efforts by AgriLife Research and the AgriLife Extension in 2009 were very successful. Data in this report highlight the activities and success of 17 major program areas supported by AgriLife Research and AgriLife Extension.

The 17 program areas represent areas from livestock and crop production to human health and serving under represented audiences. Specifically, the 17 programs include Range Management, Economics and Management, Livestock and Meat Quality, Safety and Productivity, Crop and Forage Production, and Water Management in the area of Agriculture and Natural Resources. Community and Economic Development programs are addressed by the Community Resource and Economic Development program. Family and Consumer Sciences program areas addressing Cancer Risk Reduction and Early Detection, Child Passenger Safety, Diabetes Education, Exercise and Wellness, Food and Nutrition for Limited Resource Audiences, Food Safety, and Parenting and Dependent Care. An unplanned program on Financial Management has also been included in this area. Finally, 4 H and Youth Development programs included address Character Education, Leadership and Volunteer Development, Life Skills for Youth, and Out of School Time. Output and Outcome indicators represented in the specific program areas of this report represent representative samples of successes. In many cases, additional successes were achieved. Some of these additional successes are noted in the evaluation section for each program.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	461.4	0.0	182.0	0.0
Actual	492.9	0.0	176.5	0.0

II. Merit Review Process**1. The Merit Review Process that was Employed for this year**

- Internal University Panel
- Expert Peer Review

2. Brief Explanation

AgriLife Research and AgriLife Extension Administrative Leaders serve as merit reviewers for the Federal Plan of Work, the Federal Report of Accomplishments and Results, and associated grants and contracts. This team is comprised of senior administrative staff, as well as department heads, associate department heads for Extension, and resident directors at research centers. This leadership team is responsible for the oversight and management of all programs conducted by research and Extension faculty.

III. Stakeholder Input**1. Actions taken to seek stakeholder input that encouraged their participation**

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey specifically with non-traditional groups

Brief explanation.

Both AgriLife Extension and AgriLife Research utilize various methods to reach stakeholder groups within the State of Texas. AgriLife Extension used multiple sources of input from stakeholders. These include local clientele, commodity/special interest groups, trend data monitored by specialists, various county committees, elected officials, and emerging issues. Teams of Extension and research faculty meet based on need to analyze these issues, which leads to priority setting and development of programs to address the needs and issues raised by the various stakeholder groups and methods.

In 2009, and as part of AgriLife Extension's strategic planning effort, local Leadership Advisory Boards (LABs)

continued to validate issues raised in the local stakeholder input process. Leadership Advisory Boards serve as a conduit to local citizens and their needs. These boards are comprised of community opinion leaders charged with providing long term visioning and advocacy for the local Extension program. Approximately 2,500 individuals serve

on Leadership Advisory Boards across the state. These issues are currently undergoing validation again as part of this process.

In addition, another 10,000 citizens serve on program area committees, task forces, coalitions, and youth boards.

These volunteers represent specific areas of the local program and are involved in issues identification, program development and delivery, evaluation and interpretation of programs, and management of other volunteers. These volunteers represent all 254 counties in the state.

The AgriLife Research Administration, Department Heads, and Resident Directors regularly met with the major agricultural industries and commodity groups in Texas. AgriLife Research has encouraged the public to participate in helping set priorities, assess current program and process effectiveness, and determine future directions. These processes were open, fair, and accessible to encourage individuals, groups, and organizations to have a voice, and treated all with dignity and respect. Stakeholders were initially identified by membership in listed organizations, though all events were public and were announced in the press and other written notice. Input from these events was captured by AgriLife Research participants, and in some cases, was published for further public use.

Stakeholder input has always been critical to AgriLife Research processes and programs, and listed events and organizations continue as essential partners in setting the AgriLife Research agenda, and recognizing and addressing emerging issues. A concentrated effort was done for small grains, corn, sorghum, and cotton resulting in a jointly developed strategic plan.

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys
- Other (Meetings with various stakeholder groups)

Brief explanation.

The basis for AgriLife Research and AgriLife Extension's relevance in the State of Texas is grassroots involvement. AgriLife Extension has utilized Open Listening Sessions as part of the grassroots Texas Community Futures (TCFF) Process. These sessions provide local clientele the opportunity to voice their opinion on issues of importance to their lives and the lives of others in their community. The TCFF process was first implemented in 1999 and again in 2004.

In 2008, and as part of AgriLife Extension's strategic planning effort, local Leadership Advisory Boards (LABs) continued the process to validate issues raised in the local stakeholder input process. Leadership Advisory Boards serve as a conduit to local citizens and their needs. These boards are comprised of community opinion leaders charged with providing long term visioning and advocacy for the local Extension program. Approximately 2,500 individuals serve on Leadership Advisory Boards across the state. In addition, another 10,000 citizens serve on program area committees, task forces, coalitions, and youth boards. These volunteers represent specific areas of the local program and are involved in issues identification, program development and delivery, evaluation and interpretation of programs, and management of other volunteers. These volunteers represent all 254 counties in the state.

Information from other stakeholders is obtained in various ways. Regular meetings are held with various commodity and interest groups. These groups provide input into programmatic decisions including development of new efforts, modification of existing efforts, and termination of programs that are no longer relevant. Finally, various subject

matter groups employ the use of surveys and other needs assessment processes to gain information about their subject area. Data from these processes are used to develop programs to address issues.

AgriLife Research has incorporated data from the AgriLife Extension's process, as well as other stakeholder input methods, for development of initiatives and programs.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Meeting with invited selected individuals from the general public
- Other (Modified Nominal Group Process)

Brief explanation.

Both AgriLife Extension and AgriLife Research use multiple methods to reach stakeholder groups within the State of Texas. AgriLife Extension uses multiple sources of input from various stakeholders. These include local clientele, commodity/special interest groups, trend data monitored by specialists, various county committees, elected officials, and emerging issues. Teams of Extension and Research faculty meet to analyze these issues which promotes priority setting and development of programs to address the needs and issues raised by the various stakeholder groups and methods. Methods of data collection include surveys, focus group sessions, data collected as a result of program evaluations, expert panels, meetings with stakeholders, and open forum type meetings to solicit input. All data from all sources is considered when decisions are made regarding the future directions of Research and Extension efforts. A NASS survey of 1,681 wheat producers indicated that 80% considered Extension recommendations very important in selecting their wheat varieties.

3. A statement of how the input will be considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- Redirect Research Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities
- Other (Create strategic plans)

Brief explanation.

Both AgriLife Research and AgriLife Extension use data from the various stakeholder input processes to direct programming efforts at the local, district, regional, and state level.

In the summer of 2007, Regional Teams began to meet to analyze current and emerging issues raised from various stakeholders. Information from these meetings will lead to the refinement of current programs and the development of new programs to address high priority issues.

In addition, strategic plans and roadmaps for AgriLife Research and AgriLife Extension have been developed to guide our efforts. Priority areas of this plan have been used to guide the efforts of this POW. Both the Science

Roadmap and the Extension Roadmap can be found at <http://agprogram.tamu.edu/roadmaps.cfm>.

Brief Explanation of what you learned from your Stakeholders

Information from key stakeholder groups both informs and validates the strategic plans, and research and programming efforts for both AgriLife Research and AgriLife Extension. This information allows both agencies to remain relevant and accountable for the public funds entrusted via partnerships with local, state, and federal governments.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
12011684	0	7259153	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	7167636	0	7261719	0
Actual Matching	7167636	0	18701645	0
Actual All Other	44803797	0	31778018	0
Total Actual Expended	59139069	0	57741382	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from				
Carryover	2449498	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Range Management
2	Economics and Management
3	Diabetes Education
4	Exercise and Wellness
5	Community Resource and Economic Development
6	Water Management
7	Parenting and Dependent Care
8	Character Education
9	Out of School Time
10	Leadership and Volunteer Development
11	Food Safety
12	Food and Nutrition Education for Limited Resource Audiences
13	Livestock and Meat Quality, Safety, and Productivity
14	Life Skills for Youth
15	Crop and Forage Production Systems
16	Child Passenger Safety
17	Cancer Risk Reduction and Early Detection
18	Family Financial Security
19	Global Food Security and Hunger
20	Childhood Obesity
21	Climate Change
22	Sustainable Energy

V(A). Planned Program (Summary)**Program # 1****1. Name of the Planned Program**

Range Management

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
112	Watershed Protection and Management	40%		40%	
121	Management of Range Resources	60%		60%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	16.5	0.0	20.0	0.0
Actual	25.6	0.0	23.7	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
372269	0	788737	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
372269	0	1974955	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2326998	0	5788325	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Primary activities in this program will focus on development and conducting of research and educational programs to support proper management and restoration of native rangelands for clientele. Applied research and result demonstrations to support improved rangeland management will also be conducted. Training and support for County Extension Agent and Specialist training will be provided on appropriate and timely aspects of rangeland management. Emphasis will be placed on continued development of appropriate publications, websites, online courses, and other teaching materials.

Work of the AgriLife Research and AgriLife Extension is conducted jointly where research-based information is generated and transferred to clientele.

2. Brief description of the target audience

The target audiences for this program include federal and state agencies, youth and adults. The adult audiences specifically include traditional landowners, operators, absentee landowners, and "new", novice landowners that either just bought land or have made a career off the land and have returned to it.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	9000	45000	700	0
Actual	24295	257879	3197	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	50	
Actual	18	184	202

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	450	791

Output #2

Output Measure

- # of research-related projects.

Year	Target	Actual
2009	35	88

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of Land Managers who report increased knowledge leading to better decision-making.
2	% of livestock producers who report increased knowledge of rangeland monitoring, watershed management, weed and brush control.
3	# Result demonstrations/applied research projects.

Outcome #1**1. Outcome Measures**

% of Land Managers who report increased knowledge leading to better decision-making.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	65	46

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

BRUSH BUSTERS have been a trademarked, flag ship program for the ESSM Extension Program Unit since 1995. This program, which received the 2000 Texas Environmental Excellence Award from the then Texas Natural Resource Conservation Commission, was documented during 1996 to 1998 to have been used on 1.52 million acres of rangeland, saving ranchers about \$17.7 million in treatment costs as compared to traditional herbicide applications while reducing herbicide usage an average of 18.7% per year. BRUSH BUSTERS is now 15 years old, and it was a decision of the ESSM Extension Program Unit to refocus on BRUSH BUSTERS in 2009 to re-establish the brand and to educate users about new species and treatment modifications added to the program since its inception.

What has been done

In 2009 the Extension Range Specialists developed a curriculum for pesticide CEU training that focused on BRUSH BUSTERS. The training curriculum included 11 core teaching point in the area of management of mesquite, pricklypear and juniper. A total of 38 counties and 1,605 individuals participated in the CEU training described above, representing over 3.8 million acres of Texas rangeland.

Results

Percent gain in knowledge averaged 46% across the 11 teaching points, with a range of 32% to 56%, for individual teaching points. When participants were asked if the information they received from the training would help them make better decisions selecting and using herbicides on rangeland, 99.7% responded YES.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
121	Management of Range Resources

Outcome #2**1. Outcome Measures**

% of livestock producers who report increased knowledge of rangeland monitoring, watershed management, weed and brush control.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	70	65

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

The number of new landowners managing small acreages continues to grow in Texas. Many of these new land managers are at least one generation removed from those who grew up on the land and as a result, lack the natural resource management experience of their ancestors. These land managers need management skills, ecological understanding and knowledge about the impact of decision making toward the production of clean air and water, healthy wildlife, sustaining a healthy range ecosystem and livestock enterprises. Texas AgriLife Extension Service professionals are well positioned to help teach the ecological principles and management skills needed to maintain the health of Texas' air, waters, and the vitality of range ecosystems, native wildlife, and domestic animal enterprises.

What has been done

Extension Range Specialists in Texas have developed the Range 101, 201, 301, and 401 series training classes directed to educate rangeland managers and owners of small to medium size land holdings about goals of landownership, planning, ecology, making correct decisions, monitoring and management practices directed at improving forage production, promoting a healthy rangeland landscape and productive wildlife populations. To date, workshops have been conducted as classroom or hands-on field activities. However, during 2009 we began filming these workshops to develop on-line courses to be available to clientele unable to make the commitment to attend day-long workshops.

Results

During 2009, these series workshops were held in Travis and Hays Counties. A Range 101 Workshop was conducted in April. Twenty landowners participated in this event. Average increase in understanding across 12 teaching points evaluated was 67% with a range of 43 to 88%. Twelve of the 17 participants returning the evaluation indicated that what they had learned would help them make better land management decisions.

A Range 201 Workshop was conducted in May. Thirty-four landowners attended this event. A retrospective-post evaluation was conducted for this event. Thirty-one workshop participants returned the evaluation. Average increase in understanding across the seven workshop topics was 57% with a range of 46 to 88%. Twenty-six of the 31 participants returning the evaluation indicated that what they had learned would help them make better land management decisions. Twenty-eight of the participants indicated that they owned or operated a total of 9,648 acres with an average of 345 acres and a range of 3.5 to 1,900 acres. These land holdings were in 17 different counties. Twenty-eight of 29 (97%) participants indicated that they intended to conduct brush

management on their property. Eight of 28 (28%) of participants indicated that they intended to convert native grassland to non-native pastures. Thirteen of 28 (46%) of participants indicated that they planned to convert non-native pastures to native grassland.

Educational presentations and field exercises were conducted for Range 301 in October. Thirty-six landowners participated in this event. A retrospective post-pre evaluation conducted for this event showed an average increase of 67% in understanding for the 4 teaching areas measured with a range of 57 to 76%. One-hundred percent of the field day participants completed the evaluation. One-hundred percent of participants indicated that the information presented during the field day would help them make better management decisions. An estimated 9,300 acres was represented by the landowners participating in this event.

Range 401 was introduced for the first time with a program conducted in October. The program demonstrated how prescribed burning can be used to enhance rangeland water quality and water quantity. A total of 31 landowners and managers participated in the event. Participants had an average gain in perceptual knowledge of 70.18% across 8 topic areas evaluated. The greatest gain in knowledge by participants came under the topic "Understanding the Laws, Rules and Regulations Pertaining to the use of Prescribed Burning" with a perceptual knowledge gain of 131.58%, indicating that many small to mid-size acreage owners are not aware of the laws governing the management of the land with prescribed burning as a tool. Participants owned or operated a total of 7,453 acres.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
121	Management of Range Resources

Outcome #3

1. Outcome Measures

Result demonstrations/applied research projects.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	190

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Result demonstrations are an effective tool in actively teaching principles and practices related to management of rangeland. Texas Extension Range Specialists are active working with County Extension Agents and cooperating landowners to establish quality demonstration projects across the state.

What has been done

During 2009, over 190 active result demonstrations related to rangeland weed and brush control were established and evaluated in the state. Active demonstrations are established in 115 different counties in Texas.

Results

Results of these demonstrations are presented at field days and in publications. One publication, B-1466, Chemical Weed and Brush Control Suggestions for Rangeland summarizes the results from years of applied research and demonstration projects. This publication alone was distributed to over 1,174 people at county events and downloaded via the internet another 785 times, for a total distribution of 1,959. A sample of the people that received this publication were asked if the information they received would help them make better management decisions selecting and using herbicides on rangeland, and 99% responded yes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
121	Management of Range Resources

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

Brief Explanation

No external factors affected this program in 2009.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Other (anecdotal)

Evaluation Results

BRUSH BUSTERS have been a trademarked, flag ship program for the ESSM Extension Program Unit since 1995. This program, which received the 2000 Texas Environmental Excellence Award from the then Texas Natural Resource Conservation Commission, was documented during 1996 to 1998 to have been used on 1.52 million acres of rangeland, saving ranchers about \$17.7 million in treatment costs as compared to traditional herbicide applications while reducing herbicide usage an average of 18.7% per year. BRUSH BUSTERS is now 15 years old, and it was a decision of the ESSM Extension Program Unit to refocus on BRUSH BUSTERS in 2009 to re-establish the brand and to educate users about new species and treatment modifications added to the program since its inception.

In 2009 the Extension Range Specialists developed a curriculum for CEU training that focused on BRUSH BUSTERS. The training curriculum included 11 teaching points. A Retrospective Post survey was conducted to determine knowledge gained for each of the teaching points.

A total of 38 counties and 1,605 individuals participated in the CEU training described above, representing over 3.8 million acres of Texas rangeland. Percent gain in knowledge averaged 46% across the 11 teaching points, with a range of 32% to 56%, for individual teaching points. When participants were asked if the information they received from the training would help them make better decisions selecting and using herbicides on rangeland, 99.7% responded YES.

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 2****1. Name of the Planned Program**

Economics and Management

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
602	Business Management, Finance, and Taxation	25%		25%	
604	Marketing and Distribution Practices	25%		25%	
605	Natural Resource and Environmental Economics	10%		10%	
606	International Trade and Development	10%		10%	
608	Community Resource Planning and Development	10%		10%	
610	Domestic Policy Analysis	20%		20%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	22.1	0.0	14.0	0.0
Actual	20.5	0.0	10.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
322827	0	605937	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
322827	0	1010341	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2017943	0	2230823	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Numerous activities, events were conducted to address the needs of producers and other clientele in the area of economics and management. These included but were not limited to workshops, one-on-one intervention, marketing clubs, cooperatives, popular press articles, extension publications, and other methods as needed. These educational approaches focused on the identified

needs of those who participated in our programs.

Work of AgriLife Research and AgriLife Extension was conducted jointly where research-based information was generated and then transferred to clientele. This research work was conducted primarily on campus with dissemination efforts both on campus and at various research and extension centers across the state.

Collaborative efforts were also an important part of this area. Work with various commodity groups and other agencies were conducted by both AgriLife Research and AgriLife Extension faculty. Examples of this work included the Texas Corn Producers on policy work and the Texas FSA office on price forecasts for lending purposes for the coming year.

2. Brief description of the target audience

The target audience for the economics and management program included all Texas producers. Specifically, commercially viable agricultural producers were targeted, but additional efforts were targeted to small scale operators, part-time producers, new/young landowners/producers, and commodity groups.

The target audiences were very diverse in knowledge, skills, attitudes, and aspirations to learn and adopt important strategies to be successful. Therefore, the methods used in this area varied depending on which audience was being addressed.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	26500	15000	250	0
Actual	32808	168787	1506	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 1

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	20	150	
Actual	20	111	131

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	1200	999

Output #2

Output Measure

- # of research-related projects.

Year	Target	Actual
2009	45	41

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of producers that report a savings in money or increased profit by best management practices adopted.
2	% of target audience that reports an increased knowledge of economics and management strategies.
3	Number of producers who conduct whole farm or ranch risk assessment evaluations.

Outcome #1**1. Outcome Measures**

Percent of producers that report a savings in money or increased profit by best management practices adopted.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	30	42

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Producers attending in-depth workshops are learning the information needed to improve their risk management skills, and increase their economic returns.

What has been done

A 2.5 year post survey was mailed to participants of the 2007 Master Marketer program to determine knowledge gained, adoption of new practices, and economic impact. The survey was an in-depth 14-page survey that was followed up with reminder postcards and phone calls. The survey was done 2.5 years after the initial program to allow time for adoption of new practices and to identify economic impacts.

Results

Survey results indicated participants increased understanding of risk management tools, increase their willingness to use new tools and analysis, and felt that they had increase their income by an average of \$18,929 or 3.3% of gross farm income relative to how they would have performed before going through the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
610	Domestic Policy Analysis

Outcome #2**1. Outcome Measures**

% of target audience that reports an increased knowledge of economics and management strategies.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	85	91

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Producers attending in-depth workshops are learning the information needed to improve their risk management skills.

What has been done

Pre-test and post-test instruments were used to determine knowledge gained at Master Marketer, and Profitability Workshops, Understanding the Dairy Industry.

Results

Master Marketer graduates (36 respondents) showed a knowledge gain of 52.71% from pre-test to post-test. The respondents from 8 of the Profitability Workshops showed an average knowledge gain of 49.97% from pre-test to post-test. The 54 respondents from Marketing Plan Development Workshop showed an average knowledge gain of 51.39% from pre-test to post-test.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
610	Domestic Policy Analysis

Outcome #3**1. Outcome Measures**

Number of producers who conduct whole farm or ranch risk assessment evaluations.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	100	179

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

The FARM Assistance model (financial simulation strategic planning tool) was used to complete 179 analyses for producers, for demonstrations or agent planning purposes. Survey respondents show that as a result of participating in FARM Assistance, 86% claim a better understanding of the financial aspects of their operation and 86% claim an improved ability to assess the financial risks and potential impacts of strategic decisions they make. A comparison of various scenarios analyzed show that strategic planning tools can have economic benefits.

What has been done

Participants are able to analyze their own economic situation over a 10-year planning arise in using the FARM Assistance model.

Results

Comparing the difference between the basic situation and one alternative scenario implies that producers using the program, on average, could expect a \$30,000 per year difference in net worth.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
604	Marketing and Distribution Practices

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

No major external factors affected programming in 2009.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 3****1. Name of the Planned Program**

Diabetes Education

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
724	Healthy Lifestyle	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	20.2	0.0	0.0	0.0
Actual	16.2	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
235577	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
235577	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1472553	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Diabetes is a growing problem worldwide, nationally and in Texas. The number of Americans with diabetes (21 million) is projected to increase 43 percent by 2020. Health-care costs now average \$11,744 per diabetic person costing the United States \$174 billion. \$116 billion (70 percent) is spent on health care and (30 percent) in lost productivity. Just over 4 percent of the population has diagnosed diabetes, but almost \$1 of every \$5 spent on health care is for people with diabetes. Currently, only 7 percent of people with diabetes are at recommended levels for blood glucose, blood pressure, and blood cholesterol. Annual cost of diabetes to Texas is estimated at \$12.5 billion. In Texas 2.1 million people have diabetes, with only 1.7 million people from 18 years old and older (9.7 percent of this age group) aware that they have the disease. Of those diagnosed with diabetes, Caucasian, non-Hispanic comprise 8.3% of this population; Black, non-Hispanic, 13%; and Hispanic, 11.1%. Poor nutrition and self-care management increases health care costs. People with diabetes who maintain their blood glucose, blood pressure, and cholesterol numbers within recommended ranges can keep their costs, health risks, quality of life, and productivity very close to those without the disease.

Extension's response to this growing health problem is conducting diabetes education programs. The Do Well, Be Well with Diabetes (DWBW) program covers the basic nutrition/self-care management topics. People with diabetes can learn skills needed to control their blood glucose and prevent the onset of complications. Another program is the practical application of the first diabetes series entitled Cooking Well with Diabetes (CWWD). In the first phase of DWBW taught in 5 sessions, an overview, 4 nutrition- and 4 self-care management topics help people with diabetes learn the skills needed to manage their disease successfully. Those completing the first phase of DWBW are invited to participate in the practical application of concepts learned presented in a 4-lesson diabetes cooking school series. Both phases include pre-, post- and post-post-surveys that both contain matched blood glucose monitoring questions collected online. A third phase program entitled Do Well, Be Well con Diabetes is being developed to target the under-served Hispanic population. Five videotaped novelas--each with a lesson, handouts, flash cards of typical border foods with more or less carbohydrates--have been developed and are in process of pilot testing.

Research has focused on increasing consumption of whole grains in school lunch programs and in development and evaluation of programs to assist Women, Infant and Children programs at the State and National level to reduce obesity in participants.

2. Brief description of the target audience

The target audience is all people with type 2 diabetes who need training to learn self-care management skills such as limiting carbohydrate intake, increasing physical activity, taking prescribed medications, checking their blood glucose levels, and regularly visiting their health care providers. In 2009, in Do Well, Be Well with Diabetes (DWBW) nutrition and self-care lessons, the audience was an average age of 62 with 68 percent female and 32 percent male with 1,554 registered for classes; 1,007 (65%) completed the 5-week series; 6-Month Follow Up was discontinued replacing by telephone survey to a small participant sample. This diverse group was made up of: 168 (11 percent) were African American; 242 (16 percent) were Hispanic/Latino; 27 (2 percent) were Native American; 1,079 (70 percent) were Caucasian; and 15 were classified as other. In 2009, those graduates of DWBW participated in Cooking Well with Diabetes (CWWD): 706 registration, 526 wrap-up and 257 reunion. The average age was 62 years of age, with 563 females (79.7 percent) and 143 males (20.3 percent). This diverse group was made up of 49 (7 percent) were African American; 132 (19 percent) were Hispanic/Latino; 24 (3.5 percent) were Native American; 471 (68.5 percent) were Caucasian; and 6 (.8 percent) were classified as other.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	20000	60000	1000	0
Actual	16908	175949	2593	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	1250	1314

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	# of participants who report improved before meals blood glucose levels after attending 4 of the 5 Do Well, Be Well with Diabetes and 3 of 4 Cooking Well with Diabetes classes.
2	# of individuals who complete the first diabetes series of 5 lessons.
3	Number of nurses trained on diabetes education.

Outcome #1**1. Outcome Measures**

of participants who report improved before meals blood glucose levels after attending 4 of the 5 Do Well, Be Well with Diabetes and 3 of 4 Cooking Well with Diabetes classes.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1100	1125

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Poor diabetes management leads to increased health care costs. People with diabetes who maintain their blood glucose, blood pressure, and cholesterol numbers within recommended ranges can keep their costs, health risks, quality of life, and productivity very close to those without the disease. Currently, however, only 7 percent of people with diabetes are at the recommended levels.

What has been done

Extension health professionals developed low-cost, pilot-tested, 9-nutrition/self care lessons taught in five sessions to 1,554 reporting. Next came the 4-lesson cooking school taught by trained Extension professionals and their health coalition members to 706 reporting. The primary goal of this Online data collection surveys for both programs provide averages for each question (demographics, blood glucose levels, knowledge questions, lifestyle changes). Diabetes blood glucose control keeps their costs, health risks, quality of life, and productivity very close to those without the disease. This grassroots diabetes educational program is to improve blood glucose management via managing their meal plan/self care to keep normal blood glucose estimated with \$80 M total costs economic impact for rest of lives. The average age of participants from each diabetes educational program is about 63.5 years of age. Otherwise, if younger, the savings in estimated total costs economic impact for the rest of their lives might have been greater.

Results

Initially, diabetic persons' self-reported blood glucose was 135 mg/dL decreasing to 122 mg/dL after 6 months.

* At the beginning of Do Well, Be Well with Diabetes classes, the average blood glucose before meals self-reported by participants (766 reporting) was 135 mg/dL, decreasing to 122 mg/dL at 5 weeks (635), and those in Cooking Well with Diabetes self-reported 130 mg/dL by 359 at the beginning of the series and 128 reporting their blood sugar was 115 mg/dL after the classes.

* 515 (33 percent) reported checking their blood glucose 2 hours after meals.

* 62 percent (970) of the participants reported having had a hemoglobin A1c during the 12 months prior to the beginning of classes and at the end of classes it was reported to be 7.54 for 357 participants.

* At the last Cooking Well with Diabetes Class, the average hemoglobin A1c was self-reported at 6.97.

4. Associated Knowledge Areas

KA Code **Knowledge Area**
 724 Healthy Lifestyle

Outcome #2

1. Outcome Measures

of individuals who complete the first diabetes series of 5 lessons.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	750	993

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What does problem centered education really mean to the participants of both the Do Well, Be Well with Diabetes (DWBW) and Cooking Well with Diabetes (CWWD). These were obtained from the online survey data that was entered into the database by each county in which these programs were held.

What has been done

After participation in DWBW (1554) and CWWD (706), diabetic individuals wrote on their evaluation surveys unsolicited comments about what both the five classes, nine nutrition/self care lessons and the 4 diabetes cooking school lessons meant by helping them make some significant changes that they told about.

Results

Do Well, Be Well and Cooking Well with Diabetes Unsolicited Comments about their Success Stories are as follows:

- * "...My husband and I have both lost weight, reduced our A1c, and improved our lipids. Working on portions, reducing carbohydrates, and moving more is a direct result of the classes we have attended. We thank you for the support, knowledge, and experience of the leaders of the classes of both Do Well, Be Well and Cooking Well with Diabetes."
- * "...the doctors and pharmacist gave me so much information that I have gotten my diabetes and my sugar level under control..."
- * "EVERYTHING I know about diabetes came from these classes!!"
- * "...I enjoyed each class and learned so much. I am in control of my diabetes. I have it, but it doesn't have me."
- ** "Demonstrations and tasting inspired me to get back into the kitchen and cook from scratch. My husband was happy about that too. Also it saves money to cook at home and it is healthier eating too."
- ** "My blood sugar level is consistently decreasing as I use the things I have learned."
- ** "Until I came last week I was in denial, and I didn't want to deal with diabetes because I didn't want to have it. After that meeting, I went to the doctor, had my A1c checked and got a meal plan. I feel so much better about it now. I know what to do, and I can do it."
- * "These classes have helped me know how to communicate with my doctor. He's working for me now instead of the other way around."

- * ...What I learned about carbohydrate counting has been most helpful. It makes me read labels and makes portion control much easier. I also continue to exercise regularly..."
- * "I haven't really taken my diabetes serious enough; however, attending these classes makes me realize the seriousness of managing my diabetes."
- * "These have been the best classes. I've learned more in the classes than I have in 15 years since being diagnosed."
- * "You saved my life. I did not want to live because of this diagnosis. I made it through Thanksgiving with an excellent blood glucose reading and expect to do the same at Christmas. Thank you, thank you, thank you for saving me - physically and mentally."
- * "Paying more attention and reading food labels has helped me learn how to reduce salt, sugar, and fat without changing the flavor."
- * "Cooking and eating for diabetes is so much easier than I thought it could be. Now I am able to keep my blood glucose in control and have lost weight at the same time."
- * "I have learned to change recipes to reduce the fat and sugar, and to cut back on things that aren't good for you."
- * "Now I understand how to use the plate method, that people need to reduce the amount of starchy vegetables and how to better control my blood glucose."
- * "Since beginning classes 8 weeks ago, I have lost 20 pounds."
- * "Sharing the cooking tips, being with other people with the same problem as me and learning more about diabetes."
- * Another diabetic woman reported that she is cooking differently for her family: adding more fiber, recognizing foods with more starch that affect her blood glucose, controlling portion sizes, using more herbs and spices instead of salt, using cooking methods without added fat, and has learned to substitute non-caloric sweeteners for sugars in her recipes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

Outcome #3

1. Outcome Measures

Number of nurses trained on diabetes education.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	75	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Wesley nurses who work in the under-served areas near and on the border of Texas cooperate with the county Extension agents-Family and Consumer Sciences in Texas serving on their health coalitions. That data is counted within the Do Well, Be Well with Diabetes and Cooking Well with Diabetes Summaries. However, for those Wesley nurses who do not work in counties with agents in county programs but see persons with diabetes on a one-to-one basis in their offices, they report separately into the online data survey collection.

What has been done

The Wesley nurses have been trained by the health and nutrition specialists in face-to-face training in 2007. They have opportunities in an online training made available for their use to keep them updated on the diabetes program and any changes made to it.

Results

The online data summary for an additional 50 persons they assisted with Do Well, Be Well with Diabetes began the series with 46 finishing it. The ages they reached were 4 to 5 years older than our average 62 year old females. They helped the participants decrease their fasting blood glucose from 108 mg/dL before breakfast to 99.8 mg/dL.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

External factors which could affect outcomes in diabetes education in Texas could be lack of access to some health care professionals in rural areas such as dietitians, nurses or other health care professionals who are current in diabetes nutrition and self-care management. Since both the Do Well, Be Well with Diabetes and Cooking Well with Diabetes programs use the model of health coalitions to support the diabetes programming statewide, this could affect the diabetes programming effort.

Appropriations being cut could limit the amount and quality of diabetes educational programming that can be planned, implemented and evaluated in each county. Also, the Extension State and County professionals are interacting with other State agencies such State Department of Health Services--Texas Diabetes Council and private funders such as the United Way, American Diabetes Association, Texas Beef Council, Dairy Maxx and diabetes companies who provide both funding (TX Diabetes Council) and in-kind types of resources as well.

Competing public priorities and programmatic challenges may be a factor in clientele deciding to participate in diabetes programs over other community programs. Diabetes research is conducted by the Center for Obesity Research and Program Evaluation and targets foods and food ingredients which contribute to a reduced risk of obesity and obesity linked diseases such as diabetes. In addition, diabetes research related to human nutrition is conducted by both the Departments of Nutrition and Food Science and Animal Science.

Costs of gasoline and time away from other responsibilities could also be a factor in whether or not a client

selects to participate these diabetes lessons. Also, funding for the delivery of these lessons--although low costing for the most part--might be limited. Costs to cover the food preparation in Cooking Well lessons might also be a factor which might need to be covered in a small registration fee.

Texas is projected to have a greater incidence rate and increased costs in the future due to the growing population of Hispanics/Latinos, who are at a greater risk for the disease. The burdens of diabetes mismanagement are disproportionately borne by those with little or no insurance coverage, lower literacy, poor or no English skills, lower educational and income levels, and poor access to transportation. Diabetes research on targeting under served audiences beginning with Hispanic programming has been planned and developed by a task force and is now being pilot tested in two South Texas Border counties.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

"Do Well, Be Well with Diabetes" DWWD Useable Survey Data collected online: 1,554 registration: 1,007 Wrap-Up. In "Cooking Well with Diabetes" CWWD Useable Survey Data collected online: 706 registration: 526 Wrap-Up Summary; 257 Reunion Surveys. Some 427 health professional volunteers who would cost roughly \$60/hour (5 week (2 hours/5 lessons DWBW=10 hours; 4-weeks (1.5 hours/4 week CWWD=6 hours per volunteer). Therefore, \$60 costs/volunteer X 16 hours=\$960 X 427 volunteers=\$409,920 saved via health volunteers assisted with both DWBW programs.

Summary Economic Impact for DWBW phases 1 & 2: The potential lifetime health care cost savings from improved diabetes management by 2009 participants, is an estimated \$80 million for rest of their lives. Goal for both DWBW and CWWD is to keep blood glucose levels below 126 mg/dL.

Key Items of Evaluation

Interpretation of the program results for "Do Well, Be Well with Diabetes" DWBW (phase 1) and "Cooking Well with Diabetes" CWWD (phase 2) resulted:

DWBW Pre-/post-survey results were as follows: DWBW, average age was 62 with 68% female and 32% male with 1,554 registered for classes; 1,007 (65%) completed the 5-week series; 6-Month Follow Up was replaced by telephone survey to a small participant sample. Only 34% (531) had previous diabetes classes with 66% stating they had no previous classes; Some 36% (561) had diabetes for 5 years or more and 28% (428) had diabetes less than a year with those in between at 2 to 4 years with diabetes 27% (478). When asked about type of meal plan given by dietitian or doctor, 45% (692) answered no meal plan; 17% (265), carbohydrate counting; 4%(62), diabetic exchange lists; 4% (63), plate method; with other, and eating regular meals with no sugar or concentrated sweets for rest of those responding. Some 766 participants reported seeing average before meals blood glucose values of 135 mg/dL(1st class) to 122 mg/dL at 5 weeks. In last 7 days, 67% (1044) checked blood sugar before breakfast with average fasting blood sugar at 99 mg/dL reported (recommended fasting blood glucose at 70 mg/dL to <126 mg/dL or under 100 mg/dL); 2 hours after meal 33% (515) checked their blood glucose with average reading of 117 mg/dL (recommended after 2 hours is 120 mg/dL or less; 1 hour after meals, 140 mg/dL or less); 62% (970) had A_{1c} test in last 12 months with only 38% (597) with average 12 at the beginning of classes with 35% (357) reducing to 7.54 on wrap-up survey.

2009 CWWD surveys were completed by enrolled diabetic individuals: 706 registration, 526 wrap-up and 257 reunion .The average age was 62 years of age, with 563 females (79.7 percent) and 143 males (20.3percent). This diverse group was made up of 49 (7 percent) were African American; 132(19 percent) were Hispanic/Latino;24(3.5 percent) were Native American; 471(68.5 percent) were Caucasian; and 6 (.8 percent)

were classified as other. Some 89.6 percent of respondents had never previously participated in a cooking school. The average hemoglobin A1c was reported at 6.97. When asked about the type of meal plan they followed on the 706 registration surveys, participants answered as follows: diabetes food exchanges, 9.8 percent (61); carbohydrate counting, 17.3 percent (108); plate method, 4.0 percent (25); 6.9 percent (43) other meal plans; and 48.7 percent (303) receiving no meal plan at all. The 2009 wrap-up evaluations (526) revealed that 90.2 percent (442) could recognize starchy vegetables; at least 91 percent (469) knew how to make foods taste sweeter by adding vanilla; and 94 percent (489) knew which cooking method would not reduce the fat content of the food. Many other food preparation techniques were learned during the Cooking Well lessons.

Data analysis for CWWD has been completed by Program Development specialist and results will be documented in peer-reviewed abstracts and/or publications in 2010.

V(A). Planned Program (Summary)**Program # 4****1. Name of the Planned Program**

Exercise and Wellness

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
724	Healthy Lifestyle	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	30.1	0.0	0.0	0.0
Actual	5.4	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
79114	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
79114	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
494532	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

A local coalition will recruit participants and provide leadership to implement Walk Across Texas! Teams of eight or classes of children at schools will be recruited to walk for eight weeks. Teams and classes are challenged to walk regularly for eight weeks, reporting their mileage on <http://walkacrosstexas.tamu.edu>, to achieve the goal of walking the approximate 830 miles across Texas on a map that allows comparisons of teams and class progress. Participants are personally recruited as well as groups like worksites, schools, churches and clubs using free media time.

NOTE: Some information from this planned program is also included in the program for childhood obesity. FTEs and financial data has been split between the two programs based on an estimate of contribution to youth related content.

2. Brief description of the target audience

Walk Across Texas! is open to anyone wanting to increase their physical activity level if they live in a community with a AgriLife Extension educator.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	17500	60000	7500	0
Actual	19953	122549	14183	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	1000	644

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increased number of miles walked per week at week one compared to week eight.

Outcome #1**1. Outcome Measures**

Increased number of miles walked per week at week one compared to week eight.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	25000	41876

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Texas ranks 8th in the nation as the most physically inactive state. Texas ranks 15th as the state with the highest adult obesity rates. Texas ranks 6th as the state with the highest childhood overweight rates. Establishing a habit of regular physical activity addresses these issues. Walk Across Texas helps people establish a habit of regular physical activity during an 8 week time period.

What has been done

Agents in 117 counties organized walking teams of 8 and school classes to walk for 8 weeks. Participants entered their mileage on <http://walkacrosstexas.tamu.edu>. Participant numbers increased significantly this year because of a special "challenge" issued by the Texas Education Agency to staff and teachers across the state.

Results

41,876 adults and youth registered statewide. 22,117 adults registered and 16,333 finished the program. Adult participants walked an average of 21.2 miles in week one and ended with 26.5 miles in week 8; this is a significant increase of 5.33 miles.

19,759 participated in school teams.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Public Policy changes
- Other (New partnership with the Texas Education Agency.)

Brief Explanation

We partnered with the Texas Education Agency to help them address new legislation requiring K-5th grade

children in school to be physically active for at least 30 minutes 5 days a week during the school day.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

The 16,333 adults finishing the 8 week walking program increased their physical activity level from an average of 21.2 miles at baseline in week one to 26.5 miles in week 8. This is a significant difference of 5.33 miles.

Over the lifetimes of the 16,120 team participants in 2009, it is estimated that 3,504 could prevent the onset of diabetes through increased physical activity.

Including the cost of lost wages, the total potential economic impact for the 2009 team participants is approximately \$188 million.

Key Items of Evaluation

Walk Across Texas is an effective physical activity program, helping participants significantly increase their physical activity level from week 1 to week 8.

V(A). Planned Program (Summary)**Program # 5****1. Name of the Planned Program**

Community Resource and Economic Development

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
504	Home and Commercial Food Service	10%		0%	
608	Community Resource Planning and Development	50%		0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	35%		0%	
806	Youth Development	5%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	37.3	0.0	0.0	0.0
Actual	48.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
698005	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
698005	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
4363121	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Provided training and program materials to County Extension Agents for purpose of conducting educational programs on community leadership, disaster preparedness, entrepreneurship, nature based tourism, and workforce education at the county level. Provided multi-county, regional and statewide educational programs on various topics to business owners and community stakeholders utilizing specialist faculty and other government and private sector partners. Assisted communities with data analysis and calculation of economic impacts for selected activities. Coordinated and collaborated with state and federal

agencies interested in rural development activities as well as worked with the Southern Rural Development Center on multi-state efforts in curriculum and professional development. Continued working relationships established with Texas rural community colleges relative to entrepreneurship and community leadership. Continued a pilot training program with confined livestock operations in the Texas Panhandle for bilingual workforce development which is meeting the needs of agribusiness firms in job retention for a culturally diverse audience. A significant part of the workforce education at the county level was related to Food Protection Management certification and Child Care training. On-line courses for Child Care Provider certification reached over 3,000 in 2009.

2. Brief description of the target audience

Target audiences for the program consist of primarily rural residents (adult and youth), elected and appointed officials, leaders and potential leaders, existing and potential business owner/managers, and employees of food service establishments and child care facilities in and around the over 1,200 communities in 241 counties that identified community or economic development related topics as an important issue for the county (241 out of the total 254 counties of the state).

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	15000	50000	15000	0
Actual	78782	479976	17140	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	2500	3232

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of targeted counties conducting economic development related educational programs.
2	Land owner/managers in selected counties serve as demonstrations of natural resource-based economic development educational programs.
3	Participants of educational programs increasing knowledge of community leadership principles.

Outcome #1**1. Outcome Measures**

Percent of targeted counties conducting economic development related educational programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	30	43

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Broad-based issue identification processes continue to identify priority rural community concerns such as economic growth, jobs, income, and quality of life. Community leaders, elected officials, local business people want their area to survive and thrive in order to maintain adequate infrastructure to grow the population and provide opportunities for the rural areas.

What has been done

The mission of the Texas CRED program is the development of individual abilities and community support for creating and growing businesses, jobs, wealth and income. Programs such as Rural Entrepreneurship, Community Leadership, Nature Tourism, Workforce Training and Certifications, Texas Friendly Hospitality, and Community Based Planning address the priority issues facing rural Texas.

Results

Some 103 counties of the targeted 241 counties have reported educational program activities addressing issues of community resources and economic development. Key programs were in entrepreneurship, leadership, workforce preparedness (including a pilot program for bilingual audience in confined feeding operations), community planning, and nature-based tourism.

4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #2**1. Outcome Measures**

Land owner/managers in selected counties serve as demonstrations of natural resource-based economic development educational programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	12	8

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Natural resource owners (including both large and small sized operations) are looking for ways to generate additional income to maintain the economic viability of their enterprises. Entrepreneurs are looking to innovation, diversification or nature tourism as strategies to expand non-traditional or other activities for economic development. Entrepreneurs want information on what other successful operations are doing, and communities want to support local business.

What has been done

Educational activities made up of workshops, webinars, and individual case studies were conducted statewide for natural resource owners, entrepreneurs, and community leaders. Technical assistance was provided to some 50 individual business owners relative to either nature tourism opportunities or other business counseling, including reviewing business plans.

Results

La Copita ranch tours resulted in clientele learning novel ways to expand their nature tourism businesses into photography, birding, and other opportunities. The nature tourism specialist maintains an inventory of nature-based enterprises from voluntary submissions of the firms involved. Fewer businesses have been willing to use their operation as an example given the current economic climate.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #3**1. Outcome Measures**

Participants of educational programs increasing knowledge of community leadership principles.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	85	100

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Issue identification processes at the local level continue to emphasize leadership to fostering sustainable and vibrant communities. Community stakeholders must be prepared to build on local strengths through leadership and partner with others to create support for economic development and quality of life. This is particularly true given the importance of regionalism to development.

What has been done

"Building Connections: Community Leadership" is an in-depth curriculum to assist participants in determining their individual leadership traits and in developing strategies for effectively leading organizations/communities. The program is implemented via 'train-the-trainer' through county faculty. A new leadership curriculum was initiated in 2009 entitled "Developing Critical Thinking Leaders". Its use hopefully will be expanded in 2010.

Results

Of the 143 participants completing multiple educational sessions, 26 were youth. 100% of those participating indicated they gained knowledge from the leadership curriculum relative to leadership characteristics.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Even though parts of Texas were not affected so much by the downturn in the economy as other sections of the country, nevertheless the recession definitely had an impact on the interest and topics associated with community and economic development. Also, fewer businesses and landowners were willing to cooperate as a demonstration of best management practices for educational purposes. The severe drought over most of Texas in the first nine months of 2009 also reduced interest in nature tourism programming. The recovery from Hurricane Ike is providing a funding opportunity to develop an accepted mechanism for determining the economic impact from similar disasters on rural areas.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

Evaluation Examples: Leadership

- Evaluation of "Developing Critical Thinking Leaders" curriculum by class participants and instructors indicated revisions are in order to improve the usefulness and applicability to community programs.
- 38% increase in knowledge of leadership styles and leadership development
- At least 75% of the audiences responding to a retrospective post survey said they increased their knowledge of leadership skills as a result of the in-depth training received.
- 75% of respondents said they would use the knowledge gained of their personality traits to become a better communicator.
- 99% agreed or strongly agreed that they can use the leadership information in their organization today.
- there was a 46% increase in the knowledge of motivating others and understanding theories of motivation.

Evaluation Examples: Entrepreneurship

- Retrospective post evaluations from 14 workshops focusing on entrepreneur support systems in the community indicated knowledge gained increased an average of at least 25%.
- AgriLife Extension actively supports the new program of Entrepreneurial Ready Communities. The first Texas community to complete all the criteria for certification was recognized (Plainview,TX).
- While AgriLife Extension cannot claim all the impacts, 35 new businesses have started in Plainview over the past year--partially as a result of the educational efforts of AgriLife Extension and others.
- 63% of respondents at Bexar county Youth Entrepreneurship Conference stated this event will help them make more money and reduce their expenses in the future.
- Youth participating in "Kidz with Biz Ideaz" program gained skills and knowledge related to entrepreneurship.

Evaluation Examples: Nature-based Tourism

- 100% of participants indicated they will benefit economically as a direct result of what was learned

- 100% of respondents indicated the value of the educational programs was at least \$1 per acre. 35% indicated the value of the education was at least \$4 per acre. (71% of the participants owned or managed at least 300 acres)
- 100% of participants on Discovery Tour increased understanding of nature tourism business program options

Evaluation Example: Community Activities

- The city leader responsible for the Park Master Plan had limited knowledge of how to do a park master plan. After technical assistance from AgriLife Extension Specialists, she has scheduled and completed over 10 focus groups as part of her community park needs assessment.
- Exit evaluations of Annual Conference for Texas Event Leadership indicate 97% improved their professional effectiveness. For 4 of the 5 sessions, over 80% indicated the education would benefit their community economically.

Evaluation Examples: Workforce Preparation

- 93% of respondents from Child Care Provider Conference indicated the information gained at the conference will help them be a more effective child care provider. 100% indicated they would use the information learned in the future.
- 29% of participants in Food Protection Management course increased knowledge of serving food safely
- 83% of Food Protection Management course participants successfully passed the state food handlers certification exam
- 85% of respondents participating in Texas Friendly Hospitality training indicated they were now better able to inspire their employees to feel motivated and provide excellent customer service.
- Based on assistance provided by Extension specialists, the Houston Parks & Recreation Department was able to design and complete a pilot testing phase utilizing appropriate methods to quantify park users.

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 6****1. Name of the Planned Program**

Water Management

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	50%		50%	
112	Watershed Protection and Management	50%		50%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	19.3	0.0	14.0	0.0
Actual	20.3	0.0	14.5	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
294471	0	586609	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
294471	0	1722673	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1840692	0	3010827	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Water demand in Texas is about 18.3 million acre-feet in 2010 and demand is expected to increase to almost 21.6 million acre-feet by 2060. Irrigation uses about 10 million acre feet of water a year in Texas. Irrigation water demand is expected to drop by almost a million acre-feet over the next 50 years. Water conservation will remain a critical issues as fresh water availability in Texas is project to decrease from 17.5 to 14.2 million acre-feet by 2060. Research is critical for identifying methods for utilizing alternative sources of water to meet the water deficit.

Water quality issues must be addressed to provide the water needed to meet our potable, irrigation, manufacturing, energy production, recreational and environmental demands. Effective best management practices are needed to protect water quality as production systems are implemented to meet our demand for agricultural products.

The work of the Texas AgriLife Research and Texas AgriLife Extension Service is conducted jointly where research-based information is generated and then transferred to clientele. Science-based information is critical to addressing the water issues facing our clientele. The research based information serves as a support system for decision makers managing our water resources. The following describes activities focusing on water.

Publish research findings generated through evaluation of best management practices to efficiently manage available water resources, to limit off-site contaminant transport from production, processing, and landscaping systems, to utilize alternative water sources and to remove contaminants from impaired/alternative water sources.

Develop and conduct research and educational programs utilizing direct and indirect educational methods to support efficient utilization and conservation of water resources, to develop alternative water supplies, to implement best management practices on agricultural production and landscapes to protect water resources from contaminants, to promote proper management of surface and ground water resources, to enhance rainwater harvesting and to remove contaminants from impaired water supplies.

Continue development of educational resources such as articles, fact sheets, bulletins, curriculum materials, short course manuals and other teaching materials.

2. Brief description of the target audience

Programs focusing on the issue of Water addresses target audiences including but not limited to producers, homeowners, landscape managers, industry practitioners, water resource managers, and others who identify themselves with this issue.

Our research and education programs target specific issues and audiences to assure a relevant and timely response. Water is an issue that crosses all boundaries between rural and urban audiences. Our programming addresses a broad range of water issues including water use efficiency, water quality protection and water resources management for a broad range of audiences. All of the targeted audiences need to increase their water literacy to ensure the ability to make informed decision about water management. The long-term issue of having a sufficient water supply will be addressed through an integrated approach.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	9000	50000	6000	0
Actual	237598	236445	33317	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 1

Patents listed

Sludge Treatment

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	150	
Actual	0	175	175

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- The number of group educational sessions conducted on water issues.

Year	Target	Actual
2009	450	1457

Output #2**Output Measure**

- # research-related projects.

Year	Target	Actual
2009	55	62

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of participants who report an increased knowledge of best management practices related to water management.
2	% of participants who report the plan to or have adopted best management practices related to water management.

Outcome #1**1. Outcome Measures**

% of participants who report an increased knowledge of best management practices related to water management.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	65	92

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Our clientele must make informed decisions regarding the conservation of our water resources. They must understand water resources, best management practices for protecting our water resources, effective practices for treating wastewater, irrigation technologies, irrigation scheduling, and policies for efficient use of the resource. Water management strategies are needed to efficiently utilize available water resources. Stormwater management is a critical issue for protecting our water resources. Rain fall can carry contaminants from our property which degrade our water resources. People must have a functional knowledge of the hydrologic cycle to understand how rain replenished our lakes, rivers, aquifers and oceans. This valuable water can be contaminated by the soil, nutrients, pesticides and organic matter critical to maintaining our lives.

What has been done

A series of training events were implemented to raise the water literacy of the various target audiences. Short courses ranged in length from 6 to 32 hours of instruction depending on the audience and desired learning objectives. The topics at the various training events described irrigation technologies, irrigation scheduling, crop water requirements, ET estimation, harvesting rainwater, stormwater management, watershed planning, watershed stewardship, wastewater source evaluation, wastewater treatment technologies, installation practices, operation and maintenance practices, water treatment and disinfection practices.

Results

Water conservation programs increase clientele knowledge and facilitate the ability to be better decision makers. Some highlights from educational programs indicate: Eighty-nine percent of respondents at a drip irrigation field day indicated that they received information that would be helpful in their irrigation decisions. 100% of irrigation district personnel attending SCADA/Automation trainings reported an increase in knowledge. Most (83%) of practitioners attending the basic maintenance provider course gained knowledge of operation and maintenance of onsite wastewater treatment systems. 73% of attendees at a rainwater harvesting/desert landscaping course gained knowledge of water contaminants. 76% of the Texas Watershed Planning course participants indicated knowledge gained on watershed management. 60% of SWAT course participants indicated knowledge gained. Most Master Gardener (90%) and all Master Naturalist (100%) train-the-trainer course participants gained knowledge of rainwater harvesting practices. Most (98%) of landowners in the Cedar Creek watershed attending the educational programs gained information on how their actions can impact reservoir water quality.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management

Outcome #2**1. Outcome Measures**

% of participants who report the plan to or have adopted best management practices related to water management.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	25	69

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Our clientele must implement best management practices to manage their livestock and poultry production systems, crops, rangeland, landscapes and wastewater treatment systems. The clientele must select appropriate technologies and effectively manage those technologies to make informed decisions regarding the conservation of our water resources. They must understand water resources, best management practices for protecting our water resources, effective practices for treating wastewater, irrigation technologies, irrigation scheduling, and policies for efficient use of the resource. Water management strategies are needed to efficiently utilize available water resources.

What has been done

A series of training events were implemented to raise the water literacy of the various target audiences. The short courses range in length from 6 to 24 hours of instruction depending on the audience and desired learning objectives. The topic at the various training events described irrigation technologies, irrigation scheduling, crop water requirements, ET estimation, harvesting rainwater, stormwater management, watershed protection, wastewater source evaluation, wastewater treatment technologies, installation practices, operation and maintenance practices, water treatment and disinfection practices.

Results

Water conservation programs share information with people about adoption of best management practices. As a result of the School of Irrigation short courses, 71% of practitioners plan to take action and make changes to their daily practices based on information gained. About one-half (48%) of the homeowners attending the maintenance of aerobic treatment units course indicated a willingness to adopt the recommended management practices. 75% of the Texas Watershed Planning course participants indicated a willingness to adopt planning practices. 80% of SWAT course participants indicated willingness to adopt modeling practices. All (100%) of Master Gardener and Master Naturalist train-the-trainer course participants will adopt rainwater harvesting practices. Most (95%) of landowners in the Cedar Creek watershed attending the educational programs indicated a willingness to adopt practices to improve the lakes water quality.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Other (Other Program Areas)

Brief Explanation

Program activities allowed successful completion of goals.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)
- Case Study
- Other (Anecdotal)

Evaluation Results

An irrigation training program was developed to provide educational opportunities and informational resources to support efficient irrigation technologies and practices. A curriculum guide and resource compilation in print and electronic formats were used in six training events throughout the state over a 15 month period in 2008 and 2009. Irrigation conferences were conducted in Lubbock, Mercedes, Chillicote, Sinton, Hondo and Amarillo. The meetings had over 350 attendees, and target audiences included progressive agricultural producers, technical service providers, agencies, agricultural consultants, irrigation professionals and extension educators. The percentage of respondents to the evaluation instrument reporting knowledge gained, willingness to adopt practices and economic benefit was 84% (86 of 102), 57% (63 of 110) and 75% (51 of 68), respectively.

Texas Watershed Stewards (TWS) is a highly successful educational program designed to support the development and implementation of Watershed Protection Plans (WPP) and Total Maximum Daily Loads (TMDL) by promoting a sustainable proactive approach to managing water quality at the local level by empowering individuals to take leadership roles in the management of water resources. Preliminary results from pre- and post-test evaluations indicate that knowledge regarding pollutant sources/BMPs and watershed function has increased by 58% and 35%, respectively. Furthermore, 99% reported the program enabled them to be better stewards of their watershed. Preliminary results from 6-month delayed post-test evaluations indicate that 80% of workshop attendees have more closely monitored individual actions that could impair water quality, 80% have adopted and/or maintained water quality BMPs on their property, and 65% have encouraged others in their community to attend a TWS workshop. Being able to communicate to citizens so that they understand how their actions on the land affect water quality and quantity is critical. Creating some type of 'connection' to the resource (land, water, biodiversity) is also very important.

Landscape Irrigation is a high consumer of municipal water supply, especially during the summer months. By considering water conservation during the design, installation and operation of landscape irrigation systems,

the amount of water needed to maintain landscapes can be significantly reduced. Persons who have benefitted most from the short course are licensed irrigators, landscape contractors, and conservation directors of cities and public utilities. This training program promotes water conservation by the adoption of management practices such as auditing and seasonal irrigation scheduling. In total, the School of Irrigation taught 21 short courses to 308 irrigators on such topics as auditing, drip irrigation, weather stations, irrigation scheduling, computer aided design and ET "Smart" irrigation controller technology. As a result of these short courses, 71% plan to take action and make changes to their daily practices based on information gained from these trainings and 69% of the students anticipate benefiting economically as a direct result of what was learned from the trainings. The School of Irrigation currently holds a 92% overall satisfaction rating from its students. 83% of Professionals who attended the Landscape Irrigation Auditing Course became Certified Auditors and 65% of Short Course attendees reported an increase in their knowledge of efficient landscape irrigation practices.

Key Items of Evaluation

Water educational programs reached a wide range of audiences. The program participants gained knowledge in water literacy which is critical to addressing current and future water issues. Some evaluation data is summarized from educational programs.

Irrigation water quality data was collected from 90 sites in the lower Rio Grande basin to address water quality concerns raised through the GAPs program. Most (85 of 90 or 94.4%) of the irrigation water samples are adequate for furrow or sprinkler irrigation in vegetable crops under guidelines for generic E. coli concentrations for California. Three of the five samples not eligible for furrow or sprinkler irrigation could be used with drip irrigation.

Onsite wastewater treatment systems educational program taught four courses reaching 354 wastewater practitioners. An evaluation summary was distributed and analyzed for the basic maintenance provider course with 83% of respondents indicating knowledge gained.

The Earth-Kind Landscaping program empowers County Extension Agents with a research-based educational program that is standardized, easy-to-use, and produces valuable Outcomes for AgriLife Extension to showcase to all stakeholders. A total of 2,699 evaluations were submitted (530 from On-line Master Gardener Training Modules, 108 from the On-line Earth-Kind Challenge, 59 from the Earth-Kind Website, 2002 from On-site Presentations) during the past year. Most respondents (94%) indicated an increase in knowledge and could use what they learned in the program to analyze land situations and make better landscape management decisions. Most participants (92%) indicated adoption of the practices would result in economic savings (average reported of \$248). Obstacles to adoption of Subsurface Drip Irrigation (SDI) include need for information on SDI system design, maintenance and management. A collaboration between faculty of Kansas State University, Texas AgriLife Research, Texas AgriLife Extension Service and USDA-ARS at Bushland is developing educational materials and conducting field day educational events. Presentations at a field day included research-based recommendations for crop-specific SDI management; maintenance issues; advantages and disadvantages of SDI; system design, layout, uniformity and germination issues; and other topics. Audiences included agricultural producers, irrigation professionals, USDA-NRCS personnel, agricultural and engineering consultants, and others. One event held in Halfway, Texas had approximately 118 participants. According to an evaluation survey, 63% of respondents indicated an increase in level of understanding of at least one topic; all other respondents indicated a high level of understanding both before and after the event. Eighty-nine percent of respondents indicated that they received information that would be helpful in their irrigation decisions. Fifty percent indicated intentions to make changes in their irrigation practices as a result of information they received.

Declining water resources and water-limiting agricultural production conditions in the Ogallala Aquifer Region continue to place pressure on irrigators to manage irrigation efficiently.

V(A). Planned Program (Summary)**Program # 7****1. Name of the Planned Program**

Parenting and Dependent Care

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	11.8	0.0	0.0	0.0
Actual	8.5	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
123605	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
123605	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
772636	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

AgriLife Extension's Family Development and Resource Management Unit is committed to providing educational programs to support and strengthen Texas families. In the areas of parenting, child care, and dependent care, Extension offers a wide range of programs and resources to citizens across the state. Programs and resources include train-the-trainer workshops for professionals and volunteers, multi-session parent education workshops, 1-2 hour lectures, distance education workshops, self-study child care training guides, internet resources (e.g., online child care courses, fact sheets, research briefs, trend data, links to websites), and newsletters.

2. Brief description of the target audience

Target audiences for child care programming include adults and teens providing care for preschool and school-age children in family, center and school-aged settings. Target dependent care audiences include adults and teens providing care for adults and children who are unable to provide some portion of care for themselves due to illness or age-related disabilities. Programs and

resources are accessible to target audiences regardless of gender, marital status, family status, race/ethnicity, income level, or educational level. It is estimated that 70% of this audience falls under the category of "low-income."

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	15250	45000	2500	0
Actual	19056	88936	3489	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	1	0	1

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational methods conducted.

Year	Target	Actual
2009	1250	1086

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of child care providers who increase their knowledge of child care best practices as a result of participating in child care provider trainings.
2	% of dependent care providers who increase their knowledge of dependent care best practices as a result of participating in depend care trainings.
3	% of parents who increase their knowledge of parenting practices as a result of attending parenting trainings.
4	% of fathers (father-figures) who increase the amount of time spent reading to their children.

Outcome #1**1. Outcome Measures**

% of child care providers who increase their knowledge of child care best practices as a result of participating in child care provider trainings.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	85	97

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Over 60 percent of children from birth through age 6 receive some form of child care on a regular basis from persons other than their parents. The Texas Workforce Commission estimates that there are over 100,000 child care providers caring for more than 760,000 children under the age of 13 in Texas. Having a well-trained child care workforce is essential to providing the high quality child care that children need. Evidence indicates that professional preparation is linked to higher quality care environments for children.

What has been done

In 2009, county Extension agents and their collaborators conducted 29 child care provider training conferences for over 3,000 child care providers who care for approximately 40,000 children enrolled in more than 740 child care centers/homes. Over 17,300 clock hours of training were provided to child care professionals. In addition to the face-to-face conferences, early childhood educators in the U.S. enrolled in and/or completed 9,935 online courses in 2009, including 5,236 in Texas.

Results

Over 90% of participants acquired new information from the conferences (97%), considered the trainings to be very relevant to the work they do (94%), plan to utilize the information gained at the conferences to improve their programs (96%), and consider themselves better equipped to work with the children in their care (96%). Moreover, 66% of child care providers rated the quality of the trainings "Better" or "Much Better" compared to other trainings they have attended that were not conducted by Extension.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #2**1. Outcome Measures**

% of dependent care providers who increase their knowledge of dependent care best practices as a result of participating in depend care trainings.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	80	91

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Texas has the fourth largest population in the nation of adults over age 65. The fastest growing segment of this population within Texas and across the U.S. is adults over age 85. While more than 2 million Texans - almost 10 percent of the state's population - are over 65, only 5 percent of that number live in residential care facilities. Estimates show that 10 percent of those over 65 living in the community require substantial aid that is provided by family members.

What has been done

Texas AgriLife Extension Service continues to sponsor and/or actively participate in eldercare conferences throughout the state. Conferences exist on a county or multi-county basis, often offering continuing education units to attendees. Eldercare conferences provided more than 1,980 educational contacts to social workers, long-term care administrators, activity directors, and non-professional caregivers.

Results

A recent study of the medication management program (N = 274) found that participants gained new knowledge from the session (91 percent), including but not limited to learning how medications affect older bodies (98 percent), how to safely sort and store their medications (97 percent), and how to talk to their health provider about prescription medications (97 percent).

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #3**1. Outcome Measures**

% of parents who increase their knowledge of parenting practices as a result of attending parenting trainings.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	75	97

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Parents' contributions to their children's development are unparalleled, especially during their early childhood years. Research indicates that children who grow up with actively involved and nurturing parents reap numerous benefits, including better school performance, increased self-esteem, healthier relationships with peers, healthier sex-role development, and greater access to financial resources.

What has been done

In 2009, AgriLife Extension, in collaboration with other agencies and volunteers, delivered more than 900 educational programs, reaching more than 24,000 parents, grandparents, and other caregivers (e.g., foster parents).

Results

Results from a recent evaluation study with 326 parents who participated in the Parenting Connections series indicated that the program had a very positive impact on specific parenting practices. Statistically significant attitudinal and behavioral changes from pre to post occurred in the following areas: parent-child communication, parental self-efficacy, parental involvement, and use of positive disciplinary practices. Parents also reported a significant improvement in their children's behavior after participating in the program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #4**1. Outcome Measures**

% of fathers (father-figures) who increase the amount of time spent reading to their children.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	65	76

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Learning to read and write are skills that are essential to a child's success in school and later life. One of the most important activities that parents can do to help their children acquire essential literacy skills is to read aloud to them on a frequent basis. Children who are read to at least three times a week by a family member are almost twice as likely to score in the top 25 percent on tests of reading ability than children who are read to less frequently. It is well established that fathers play a critical role in their children's development.

What has been done

Fathers Reading Every Day (FRED) is a family literacy program designed by the Texas AgriLife Extension Service to increase parental involvement in children's early literacy development, with a specific focus on fathers. Since its inception in 2002, over 20,000 fathers and children have participated in FRED nationally, including more than 8,000 from 77 Texas counties.

Results

Recent figures from a 2009 evaluation study involving more than 700 FRED participants discovered statistically significant differences from pre to post in a number of areas, including the amount of time fathers spent reading to their children, number of books read during a typical week, level of involvement in their children's education, quality of time spent with their children, and level of satisfaction with the father-child relationship.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Numerous external factors impact Extension's ability to reach parent and dependent care providers, including economic conditions in the state, competing public priorities, competing programmatic challenges, and population changes. With fewer economic resources available, clientele are increasingly turning to Extension for research-based information and programs to assist them in their various roles. The number of clientele reached in certain programmatic areas has increased (e.g., child care); whereas, in other areas the numbers have likely declined (e.g., parenting). Clientele appear to be less likely to attend multi-week

educational sessions due to competing priorities in their lives. Extension has responded by offering more programs via distance education (e.g., online courses) that enable participants to access quality programs at their convenience.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

A 2009 evaluation study with more than 2,800 early childhood educators was conducted. Participants in this study were asked to indicate their agreement or disagreement with a series of items related to the trainings. Four specific domains were assessed (i.e., acquisition of new information, intent to use information, training's influence on provider/program quality, and relevancy of training) along with an "Other" category.

Results indicate that child care providers found the trainings to be very beneficial. Over 90 percent of participants acquired new information from the conferences (97 percent), considered the trainings to be very relevant to the work they do (94 percent), plan to utilize the information gained at the conferences to improve their programs (96 percent), consider themselves better equipped to work with the children in their care (96 percent), and consider the trainings to be very cost effective (93 percent). Moreover, 66 percent of child care providers rated the quality of the trainings "Better" or "Much Better" compared to other trainings they have attended that were not conducted by Extension.

In addition to the face-to-face conferences, early childhood educators in the U.S. enrolled in and/or completed 9,935 online courses in 2009, including 5,236 in Texas.

Fathers Reading Every Day (FRED): Recent figures from a 2009 evaluation study involving more than 700 FRED participants show:

- Fathers averaged 9 hours of reading time with their children and read over 32 books together.
- Statistically significant differences from pre to post were noted in a number of areas, including the amount of time fathers spent reading to their children, number of books read during a typical week, level of involvement in their children's education, quality of time spent with their children, and level of satisfaction with the father-child relationship.

- The percentage of fathers reading to their children three or more times per week increased from 56 percent (pre-test) to 76 percent (post-test).

- Additionally, 55 percent of participating fathers reported an increase in the quality of time spent with their children; 52 percent reported an increase in their involvement in their children's education; 49 percent reported an improvement in their child's vocabulary; and 58 percent reported an improved father-child relationship.

Parenting Education: Results from a recent evaluation study with 326 parents who participated in the Parenting Connections series indicated that the program had a very positive impact on specific parenting practices. Statistically significant attitudinal and behavioral changes from pre to post occurred in the following areas: parent-child communication, parental self-efficacy (i.e., confidence in parenting skills), parental involvement, and use of positive disciplinary practices. In addition, parents reported a significant improvement in their children's behavior after participating in the program.

Key Items of Evaluation

Child Care: 66 percent of child care providers attending Extension-organized training events rated the quality of the trainings "Better" or "Much Better" compared to other trainings they have attended that were not conducted by Extension.

Fathers Reading Every Day: The percentage of fathers reading to their children three or more times per week increased from 56 percent (pre-test) to 76 percent (post-test).

Parent Education: Over 300 parents who completed the Parenting Connections program reported a

statistically significant improvement in their children's behavior (Pre: 26% described their children's behavior as "excellent" or "very good"; Post: 55% described their children's behavior as "excellent" or "very good.>").

V(A). Planned Program (Summary)**Program # 8****1. Name of the Planned Program**

Character Education

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	8.8	0.0	0.0	0.0
Actual	26.8	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
389719	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
389719	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2436076	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Texas AgriLife Extension's 4-H and Youth Development Program took action to develop the curriculum enrichment program titled **Take A Stand**. In the late 1980's, National 4-H Council developed a curriculum called *Talking with TJ* which focused on conflict resolution and teamwork. This curriculum was widely used in Texas but was no longer in print and has not been available to counties for several years. There were many requests from counties for a curriculum in this subject matter area.

2. Brief description of the target audience

Take A Stand lessons focus on five topics: conflict resolution and bullying, communication, etiquette, teamwork and cultural awareness. There are three levels of the curriculum which target the following grade levels: 3-5th grade, 6-8th grade, and 9-12th grade. Take A Stand lessons focus on five topics: conflict resolution and bullying, communication, etiquette, teamwork and cultural awareness. There are three levels of the curriculum which target the following grade levels: 3-5th grade, 6-8th grade, and 9-12th grade.

In September 2008, counties were invited to participate as a pilot site for their preferred grade level. A goal of pilot testing in 12 counties per level (36 counties total) was identified by the coordinators. The response was greater than the goal. A total of 60 counties were trained in November 2008 with 8 hours of training. Fifty counties completed the pilot and provided evaluation data and instructor feedback forms. The feedback forms were reviewed and edits were made accordingly to strengthen the curriculum content.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	10000	86500	22500	0
Actual	3384	73557	24066	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	3	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	2100	735

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of youth who report abilities (skills) changed as a result of participation in character education programs.
2	% of youth who plan to adopt character practices as a result of participation in character education programs.
3	% of youth who report an increased knowledge of character education principles.

Outcome #1**1. Outcome Measures**

% of youth who report abilities (skills) changed as a result of participation in character education programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	40	40

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Texas AgriLife Extension's 4-H and Youth Development Program took action to develop the curriculum enrichment program titled Take A Stand. In the late 1980's, National 4-H Council developed a curriculum called Talking with TJ which focused on conflict resolution and teamwork. This curriculum was widely used in Texas but was no longer in print and has not been available to counties for several years. There were many requests from counties for a curriculum in this subject matter area.

What has been done

Take A Stand lessons focus on five topics: conflict resolution and bullying, communication, etiquette, teamwork and cultural awareness. There are three levels of the curriculum which target the following grade levels: 3-5th grade, 6-8th grade, and 9-12th grade.

In September 2008, counties were invited to participate as a pilot site for their preferred grade level. A goal of pilot testing in 12 counties per level (36 counties total) was identified by the coordinators. The response was greater than the goal. A total of 60 counties were trained in November 2008 with 8 hours of training. Fifty counties completed the pilot and provided evaluation data and instructor feedback forms. The feedback forms were reviewed and edits were made accordingly to strengthen the curriculum content.

Results

-739 of 1249 (43.4%) always or often can recognize signs of anger in themselves and others and know how to control it.

-784 of 1249 (63.4%) always or often can accept and understand consequences of violence.

-584 of 1249 (47.8%) always or often can explain their point of view to others.

-761 of 1249 (62.5%) always or often can listen to other points of view.

-607 of 1249 (49.7%) always or often can compromise to solve conflict.

-933 of 1249 (76.2%) always or often respect others.

-748 of 1249 (61.4%) always or often practice good manners.

-889 of 1249 (73%) always or often are a good team member when working with a group.

-748 of 1249 (61.7%) always or often can work with others to make decisions.

-738 of 1249 (60.6%) always or often can identify ways people are alike and different.

-914 of 1249 (75.1%) always or often respect customs and traditions of others.

-842 of 1249 (75.5%) were completely or mostly satisfied with the program.

- 956 of 1249 (78.7%) completely or mostly felt that the activities were enjoyable.
- 891 of 1249 (73.5%) completely or mostly felt that the information was easy to understand.
- 852 of 1249 (70.6%) were completely or mostly satisfied with the range of topics covered.
- 952 of 1249 (79%) were completely or mostly satisfied with the instructor's response to questions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

% of youth who plan to adopt character practices as a result of participation in character education programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	30

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Texas AgriLife Extension's 4-H and Youth Development Program took action to develop the curriculum enrichment program titled Take A Stand. In the late 1980's, National 4-H Council developed a curriculum called Talking with TJ which focused on conflict resolution and teamwork. This curriculum was widely used in Texas but was no longer in print and has not been available to counties for several years. There were many requests from counties for a curriculum in this subject matter area.

What has been done

Take A Stand lessons focus on five topics: conflict resolution and bullying, communication, etiquette, teamwork and cultural awareness. There are three levels of the curriculum which target the following grade levels: 3-5th grade, 6-8th grade, and 9-12th grade.

Results

- 215 of 291 (74.4%) always or often can identify the characteristics of bullies.
- 105 of 291 (36.8%) always or often works to make their school a safe zone.
- 124 of 291 (43.8%) always or often can identify the steps in peer mediation.
- 105 of 291 (36.7%) always or often uses peer mediation to help others solve conflict.
- 192 of 291 (67.1%) always or often can describe conflict in their own terms.
- 199 of 291 (69.3%) always or often can see how physical presence can contribute to conflict.
- 159 of 291 (55.8%) always or often will change their vocabulary to be more open to communication.
- 211 of 291 (73.8%) always or often uses good manners and practices proper etiquette to make positive impressions on others.
- 241 of 291 (84.3%) always or often respects themselves and others in social situations.
- 204 of 291 (71.1%) always or often can use different communication methods for the appropriate situation.

- 203 of 291 (71.2) always or often can identify the characteristics of dating violence.
- 198 of 291 (69%) always or often can identify strategies to create a safe dating environment.
- 235 of 291 (81.9%) always or often can work effectively with others on teams.
- 154 of 291 (54%) always or often can identify the 4 C?s of teamwork and implement them in team situations.
- 220 of 291 (78.3%) always or often listens to team members to help solve problems.
- 211 of 291 (73.8%) always or often can recognize the diversity of other people.
- 249 of 291 (87.1%) always or often values their own cultural identity.
- 241 of 291 (84.3%) always or often values the diversity of all human beings.
- 246 of 291 (86.9%) were completely or mostly satisfied with the program.
- 241 of 291 (84.3%) completely or mostly felt that the activities were enjoyable.
- 248 of 291 (86.7%) completely or mostly felt that the information was easy to understand.
- 241 of 291 (84.9%) were completely or mostly satisfied with the range of topics covered.
- 256 of 291 (90.5%) were completely or mostly satisfied with the instructors responses to questions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3

1. Outcome Measures

% of youth who report an increased knowledge of character education principles.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Competing Programmatic Challenges

Brief Explanation

The 4-H Program has recently went through significant restructuring in an effort to provide more effective support to counties. This has led to some programmatic challenges.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

Evaluation Results

Behavior Changes

The 3-5th grade Participants indicated the following results because of what they experienced and learned from the Take A Stand Pilot Program:

1. 739 of 1249 (43.4%) "always" or" often" can recognize signs of anger in themselves and others and know how to control it.

2. 784 of 1249 (63.4%) "always" or "often" can accept and understand consequences of violence.
3. 584 of 1249 (47.8%) "always" or "often" can explain their point of view to others.
4. 761 of 1249 (62.5%) "always" or "often" can listen to other points of view.
5. 607 of 1249 (49.7%) "always" or "often" can compromise to solve conflict.
6. 933 of 1249 (76.2%) "always" or "often" respect others.
7. 748 of 1249 (61.4%) "always" or "often" practice good manners.
8. 889 of 1249 (73%) "always" or "often" are a good team member when working with a group.
9. 748 of 1249 (61.7%) "always" or "often" can work with others to make decisions.
10. 738 of 1249 (60.6%) "always" or "often" can identify ways people are alike and different.
11. 914 of 1249 (75.1%) "always" or "often" respect customs and traditions of others.
12. 842 of 1249 (75.5%) were "completely" or "mostly" satisfied with the program.
13. 956 of 1249 (78.7%) "completely" or "mostly" felt that the activities were enjoyable.
14. 891 of 1249 (73.5%) "completely" or "mostly" felt that the information was easy to understand.
15. 852 of 1249 (70.6%) were "completely" or "mostly" satisfied with the range of topics covered.
16. 952 of 1249 (79%) were "completely" or "mostly" satisfied with the instructor's response to questions.

The 6-8th grade participants indicated the following results because of what they experienced and learned from the Take A Stand Pilot Program:

1. 555 of 892 (64.3%) "always" or "often" can identify the characteristics of a bully.
2. 574 of 872 (66.1%) "always" or "often" avoids becoming a bully.
3. 395 of 872 (45.9%) "always" or "often" uses communication to work out problems.
4. 256 of 872 (30.1%) "always" or "often" uses peer mediation to avoid conflict.
5. 437 of 872 (51.1%) "always" or "often" can identify a cyberbully.
6. 589 of 872 (68.4%) "always" or "often" avoids using cyberbullying to deal with conflict.
7. 472 of 872 (55.3%) "always" or "often" can identify roles of team members.
8. 402 of 872 (47.1%) "always" or "often" uses teamwork to solve problems.
9. 554 of 872 (64.6%) "always" or "often" appreciates people for their differences.
10. 517 of 872 (59.9%) "always" or "often" will get to know someone before judging them.
11. 611 of 872 (76.4%) were "completely" or "mostly" satisfied with the program.
12. 671 of 872 (78%) "completely" or "mostly" felt that the activities were enjoyable.

13.655 of 872 (76.5%) "completely" or "mostly" felt that the information was easy to understand.

14.616 of 872 (71.9%) were "completely" or "mostly" satisfied with the range of topics covered.

15.689 of 872 (80.3%) were "completely" or "mostly" satisfied with the instructor's response to questions.

The 9-12th grade participants indicated the following results because of what they experienced and learned from the Take A Stand Pilot Program:

1. 215 of 291 (74.4%) "always" or "often" can identify the characteristics of bullies.

2. 105 of 291 (36.8%) "always" or "often" works to make their school a safe zone.

3. 124 of 291 (43.8%) "always" or "often" can identify the steps in peer mediation.

4. 105 of 291 (36.7%) "always" or "often" uses peer mediation to help others solve conflict

5. 192 of 291 (67.1%) "always" or "often" can describe conflict in their own terms.

6. 199 of 291 (69.3%) "always" or "often" can see how physical presence can contribute to conflict.

7. 159 of 291 (55.8%) "always" or "often" will change their vocabulary to be more open to communication.

8. 211 of 291 (73.8%) "always" or "often" uses good manners and practices proper etiquette to make positive impressions on others.

9. 241 of 291 (84.3%) "always" or "often" respects themselves and others in social situations.

10. 204 of 291 (71.1%) "always" or "often" can use different communication methods for the appropriate situation.

11. 203 of 291 (71.2%) "always" or "often" can identify the characteristics of dating violence.

12. 198 of 291 (69%) "always" or "often" can identify strategies to create a safe dating environment.

13. 235 of 291 (81.9%) "always" or "often" can work effectively with others on teams.

14. 154 of 291 (54%) "always" or "often" can identify the 4 C's of teamwork and implement them in team situations.

15. 220 of 291 (78.3%) "always" or "often" listens to team members to help solve problems.

16. 211 of 291 (73.8%) "always" or "often" can recognize the diversity of other people.

17. 249 of 291 (87.1%) "always" or "often" values their own cultural identity.

18. 241 of 291 (84.3%) "always" or "often" values the diversity of all human beings.

19. 246 of 291 (86.9%) were "completely" or "mostly" satisfied with the program.

20. 241 of 291 (84.3%) "completely" or "mostly" felt that the activities were enjoyable.

21. 248 of 291 (86.7%) "completely" or "mostly" felt that the information was easy to understand.

22. 241 of 291 (84.9%) were "completely" or "mostly" satisfied with the range of topics covered.

23. 256 of 291 (90.5%) were "completely" or "mostly" satisfied with the instructor's responses to questions.

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 9****1. Name of the Planned Program**

Out of School Time

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	3.3	0.0	0.0	0.0
Actual	1.3	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
18904	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
18904	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
118168	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

The following activities will be used to conduct the Out of School Time program:

Provide training for Extension professionals on collaborating with out of school programs, establishing 4-H clubs in after-school programs, and after-school curriculum resources Write model outcome plan for 6-8 grade after-school curriculum Establish collaborations between county 4-H programs and out of school programs Extension educators conduct training for out of school programs in youth development, curriculum resources, and establishing 4-H clubs in out of school programs Evaluate youth involved in out of school time programs on their development of life skills

2. Brief description of the target audience

The following groups are the target audience for this program:

Youth in Texas involved in out of school time programs and activities Extension educators Out of school time educators and programs

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	11000	40000	65000	0
Actual	9874	90475	138078	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	1	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group education sessions conducted.

Year	Target	Actual
2009	7500	3111

Output #2

Output Measure

- Number of trainings conducted by Extension educators with out of school time programs.

Year	Target	Actual
2009	10	24

Output #3

Output Measure

- # of youth reached in out of school time programming with Extension curriculum

Year	Target	Actual
2009	10000	52824

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of 4-H after-school club participants who develop new life skills.
2	# of new 4-H after-school clubs established.
3	# of collaborations with out of school time programs.
4	# of outcome plans conducted by agents in out of school time.

Outcome #1**1. Outcome Measures**

% of 4-H after-school club participants who develop new life skills.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	40	40

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Youth in out of school time programs are there because their parents are working and cannot be home to take care of them before and after school. Youth involved in out of school time programs are less likely to become involved in risky behavior and benefit from life skills development through enrichment activities.

What has been done

Counties have worked with out of school time programs to offer 4-H curriculum, 4-H clubs, and other learning experiences. Through 4-H clubs, youth are taught life skills such as communication, teamwork, problem solving, leadership, and much more.

Results

Youth involved in 4-H afterschool clubs have opportunities to be involved in leadership roles through club officer positions and participation in 4-H club experiences as members. Through these experiences, youth developed skills in communication, responsibility, problem solving, teamwork, and more. Specific examples include things such as:

- * how to stand up and speak to a group by making motions or debating during a club business meeting.
- * responsibility for their projects i.e. feeding animals, taking care of materials or equipment
- * personal safety and hygiene in with foods & nutrition project preparation
- * problem solving and teamwork through working together to plan community service projects and other activities

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2**1. Outcome Measures**

of new 4-H after-school clubs established.

Not Reporting on this Outcome Measure

Outcome #3**1. Outcome Measures**

of collaborations with out of school time programs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	15

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Collaborators provide resources such as facilities, staff to implement 4-H programming, money to purchase 4-H materials. Most collaborators in out of school time provide the youth for which the programs serve.

What has been done

Counties have worked to secure collaborators in the out of school time area to help facilitate 4-H clubs, projects, and enrichment activities. Examples of collaborators include but are not limited to:

- * School districts
- * Boys and Girls Clubs
- * Parks and Rec departments
- * Housing Authorities
- * Business/industry donors

Results

- * Collaborators have provided facilities for programming and training.
- * Collaborators have donated items for door prizes for training sessions, supplies for 4-H projects, curriculum and more.
- * Collaborators provide staff to be trained by Extension staff to implement 4-H programming at their site.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #4**1. Outcome Measures**

of outcome plans conducted by agents in out of school time.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	5	14

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

County agents have an opportunity to choose their outcome plan subject matter area. This decision is influenced by a number of factors including: County needs, professional experience/expertise, interests of their county committee members, and potential audiences to work with. There were 14 counties with specific plans related to out of school time. Many other counties conduct programming with out of school time audiences through output plans.

What has been done

Topics addressed in out of school time programming include:

- * Yea 4-H
- * Kidz with Biz Ideaz (entrepreneurship)
- * Health Rocks!
- * Junior Master Gardener
- * Food & Nutrition
- * Health/Safety
- * Character Education
- * Science, Technology, Engineering and Math
- * Urban Animal Science
- * Predators in the Classroom

Results

Some examples of results include:

- * Increase in knowledge in basic gardening principals such as photosynthesis, the weather cycle, metamorphosis of an insect, caring for a garden.
- * Youth gained knowledge and skills in developing a business plan, product development, marketing, and sales through entrepreneurship programs.
- * Youth gained knowledge and better understanding of the harmful effects of smoking and tobacco, being a good role model
- * Youth learned responsibility and how to care for a goat including feeding, grooming, showmanship, and more.
- * Youth gained knowledge and skills in good eating habits, good health practices
- * Youth gained knowledge about what predators are, how they impact our world, and more.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Programmatic Challenges

Brief Explanation

The cost of out of school time programs can be a challenge if parents are required to pay for services. Grant programs such as 21st century learning center grants, SOCC grants, and other private funding help to offset these costs. The federal government is looking at reducing funding to these programs which would impact programs at the local level.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)

Evaluation Results

Customer satisfaction survey results included:

95% were mostly or completely satisfied with the program.

95% were mostly or completely satisfied with the information being easy to understand.

90% were mostly or completely satisfied with the range of topics covered.

88% were mostly or completely satisfied with the instructors knowledge level.

83% were mostly or completely satisfied with the information being helpful in making good choices.

66% plan to take action or make changes because of what they learned.

Key Items of Evaluation

N/A

V(A). Planned Program (Summary)**Program # 10****1. Name of the Planned Program**

Leadership and Volunteer Development

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	40%		0%	
806	Youth Development	60%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	44.0	0.0	0.0	0.0
Actual	42.4	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
616571	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
616571	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
3854090	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

The following activities will be used to implement this program:

*Provide training for Extension professionals on the ISOTURE volunteer management model and key concepts related to volunteer administration.

*Provide training and guidance to Extension specialists in the role and support of program development related to volunteerism.

*Provide orientation and training directly to volunteers in preparation for their service resulting in a positive experience.

2. Brief description of the target audience

The following groups are included in the target audience for this program:

- *Youth and adult volunteers who have a need or interest in a Texas Extension program.
- *Extension educators
- *Youth and adults who have an interest in community development and partnerships.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	32000	250000	40000	0
Actual	15323	184759	22237	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	1	0	1

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # group educational sessions conducted.

Year	Target	Actual
2009	4000	2120

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of participants who report an increased knowledge of leadership development practices.
2	% of participants who plan to or adopt leadership development practices.
3	# of counties who adopt and implement County Youth Boards.
4	# of counties who adopt and implement at least one youth oriented Master Volunteer program.
5	# of counties who adopt and implement youth and adult partnerships.

Outcome #1**1. Outcome Measures**

% of participants who report an increased knowledge of leadership development practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	85	92

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Leadership in rural counties was identified as a significant issue through long-term strategic planning. This was an issue for both youth and adults. It is important for young people to develop and gain leadership life skills in order to grow into successful, contributing members of society in adulthood.

What has been done

An Online 4-H volunteer orientation was created for all 4-H volunteers to complete. The course was developed for new volunteers but may also be completed by any volunteers at any time. A satisfaction evaluation was completed by course participants. As of February 1, 2010, 82 volunteers have viewed the course, with 38 fully completing the course and the evaluation.

Each summer, all twelve Extension districts offer a three-day, two-night Leadership Lab to teach and develop the leadership and life skills of more than 900 youth statewide. A variety of workshops and activities are offered to the participants, including team building, public speaking, service learning, parliamentary procedure, decision-making, and problem solving.

Results

Volunteers ranked their satisfaction with the 4-H volunteer orientation course content and format according to a scale of 1 (not satisfied) to 5 (completely satisfied).

- *Flexibility of lessons - 4.8
- *Accessibility of the lessons - 4.7
- *Availability online - 4.8
- *Relevance of the information - 4.7
- *Information being easy to understand - 4.8
- *Accuracy of the information - 4.8

As a result of participating in the 4-H Leadership Labs, youth indicated the following results because of what they experienced and learned.

- *92.39% indicated that they now have the ability to make better leadership decisions.
- *85.63% feel more confident working in a team.
- *85.55% feel more confident in serving in a leadership role in their county.
- *83.09% feel more confident in their abilities as a leader.
- *82.56% feel more confident speaking with others.

*82.10% feel more confident in making decisions.

*69.23% feel more confident in public speaking.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #2

1. Outcome Measures

% of participants who plan to or adopt leadership development practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	65	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is a strong need to develop and maintain sustainable communities using appropriate community and economic development tools and programs in dynamic social and economic environments. The 2004 Texas Community Futures Forum identified Community and Economic Development as the number one issue in Texas. One educational response is to develop adults and youth in counties to be leaders of tomorrow.

What has been done

The Building Connections community leadership curriculum was utilized in ten counties in 2009. The curriculum was implemented with adult audiences through "lunch and learn" programs, Leadership Advisory Board leadership programs, Texas Extension Education Association (TEEA) and youth programs. The goal of the program is for individuals to know their personal leadership traits and styles, strategies to effectively lead organizations and understand the county political process.

Results

Participants in the Building Connections program indicated the following through evaluations:

- *100% believed that what they learned gives them the ability to lead more effectively.
- *64% agreed that they can go and use the information they learned during the program in their organization.
- *There was a 46% change in the knowledge of motivating other and understanding theories of motivation.
- *There was a 46% change reported for understanding the importance volunteers have in communities.
- *Participants also reported a 52% change in understanding the difference between visioning and planning.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #3**1. Outcome Measures**

of counties who adopt and implement County Youth Boards.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	254	254

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Youth Boards support the youth development program and give youth and adults the opportunity to create a youth-adult partnership, identify youth issues in the county and work as a team to address the issue(s) facing youth. It is important for youth to have a voice and be involved in the planning and development of programs that address issues affecting youth.

What has been done

Counties have implemented Youth Boards in their county to carry out a needs assessment process and give youth and adults the opportunity to work together to accomplish a task. Youth Boards have been established in all 254 counties in Texas, participating in the program development process of youth development programs by identifying issues, determining youth program needs for each year, helping program reach new audiences and determining the impacts of such programs.

Results

Youth Boards are being recognized in the county and youth are given the opportunity to serve in leadership positions. Youth and adults (4-H and non 4-H) are creating partnerships and working together to accomplish a task and meet the needs of youth. In 2009, 2,259 youth and adults created partnerships to meet the needs of youth locally by implemented programs on preparing for higher education, character education, agriculture awareness, engaging youth in the community, leadership and healthy lifestyles.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #4**1. Outcome Measures**

of counties who adopt and implement at least one youth oriented Master Volunteer program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	65	173

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Volunteers are the heart and hands of Extension programs and help extend the educational programs to the people of Texas. These volunteers also serve as mentors to youth.

What has been done

Volunteers have been trained through the Junior Master Gardener Program and the 4-H Livestock Mentor Program and give back to the program by providing support to the two youth programs. In 2009, 104 volunteers representing 75 counties participated in one of 4 livestock mentor trainings while twenty-nine teachers were trained through two Junior Master Gardener Program trainings offered through collaboration with the Texas Education Agency Regional Service Centers.

Results

Participants of the Junior Master Gardener teacher training program indicated the following perceptual knowledge gained as a result of the training.

- *101.61% change in knowledge of resources to assist with school garden programs.
- *76.05% change in knowledge of how to use garden or landscape as outdoor classroom.
- *65.75% change in confidence in building a garden bed.
- *63.06% change in knowledge of Texas AgriLife Extension Service Programs.
- *54.00% change in soil preparation techniques to prepare beds for planting.
- *42.23% change in knowledge of plant botanical terms used for identification.
- *92% indicated they probably will or definitely will integrate garden science with language arts, math social studies and other subjects.
- *92% also stated they probably will or definitely will share what they learned with others.

Adult project leaders trained as 4-H Livestock Mentors have indicated an increase in their ability to:

- *better plan 4-H livestock project activities,
- *carry out leader responsibilities as a volunteer,
- *provide proper animal care through nutrition, shelter and illness prevention
- *lead others,
- *adjust to new situations, and
- *resolve conflict.

Youth impacted by a Livestock Mentor through participation in the livestock project indicate the following changes:

- *86.5% increase in knowledge of breeding, feeding and management practices.
- *85.2% increase in showing respect, tolerance and acceptance through 4-H project work.
- *84.9% increase in ability to demonstrate responsibility through choices, being accountable and carrying out all duties or obligations.
- *84.9% increase in understanding of the basic principles of animal science.
- *76.4% increase in exerting fairness through following rules.
- *74.4% increase in understanding of how decisions and actions will impact animal.
- *74.4% increase in knowledge of recommended production and exhibiting practices and issues.
- *72.6% increase in exhibition of honesty, promise keeping, integrity and decision making skills.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

Outcome #5

1. Outcome Measures

of counties who adopt and implement youth and adult partnerships.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	65	65

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Youth-adult partnerships give youth and adults the opportunity to work together as a team, respect each other and work together for a common cause.

What has been done

Youth-adult partnerships have been established within Youth Boards in Texas counties. These partnerships are fostered through teamwork and board members working together with an equal voice to meet the needs of youth in the county. Five counties in Texas participate in the Engaging Youth, Serving Community program which supports the establishment of youth-adult partnerships, facilitating forums and issue discussion and planning a program to meet the issue needs identified.

Results

As a result of the youth-adult partnerships established within Youth Boards, youth and adults are learning to work together and respect each other while accomplishing a goal. Open-ended responses about youth-adult partnerships obtained from project outcomes evaluation instrument include:

- *Youth and adults have learned to respect each other.
- *Youth and adults take an equal, active role in planning meetings and activities.

- *Youth are leading program with adult support.
- *Youth are given the opportunity to be involved in giving input and make decisions.
- *Adults have learned to listen to youth's point of view, be sensitive to their abilities and work with them in equal roles.
- *The partnerships are teaching youth and to work with adults and learn to look at community issues.
- *Learning to get along with others - even learning to "agree to disagree."
- *Youth have a say in what programming is going to be conducted.
- *All are learning to cooperate to get things done.

4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

No external factors affected this program in 2009.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

Various evaluations are conducted for individual volunteer and leadership development programs facilitated by the Texas AgriLife Extension Service. Evaluation results specific to these programs are summarized and included in each program report.

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 11****1. Name of the Planned Program**

Food Safety

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	5.9	0.0	3.0	0.0
Actual	2.7	0.0	1.2	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
39263	0	57996	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
39263	0	35271	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
245426	0	175668	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

County Extension Agents (who have been qualified by the Texas Department of State Health Services) were responsible for teaching implementing the Food Protection management program which included a Certified Food Manager program and a 2-hour food handler's course for food service employees who need information on basic principles of food safety (i.e. personal hygiene, avoiding cross-contamination, and maintaining safe internal food temperatures).

Certified Food Manager programs were evaluated by surveying participants 30-days after they complete the program. This evaluation process took place throughout the year. Evaluation of the food handler program was conducted using a pre and post survey to assess change in knowledge.

Research has responded through a multi-disciplinary approach to identification, monitoring and mitigation strategies

for pathogens and adulterants to the food supply, including those that were either accidentally or intentionally introduced. Food safety research spans from pre-harvest to consumption.

2. Brief description of the target audience

The target audience includes producers, importers, processors, and individuals who are employed in the commercial/retail food service industry. This includes cooks, managers, and owners who are affiliated with foodservice establishments including restaurants, school food service, bed and breakfasts, prisons, and other establishments that prepare and serve food to individuals.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	4000	27500	100	0
Actual	3883	82216	667	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 2

Patents listed

* Maxim Electron Scatter Chamber

* Methods and Systems for Detection of Contaminants

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	25	
Actual	0	22	22

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	300	386

Output #2

Output Measure

- # of research-related projects.

Year	Target	Actual
2009	10	15

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	FPM Pass/Fail Rate - percentage of participants who pass the DSHS Certified Food Manager exam on the first attempt.
2	Self-reported adoption of using a food thermometer to measure internal temperatures of hot/cold foods being held (% of individuals who report practicing this behavior "always" after completing the program)
3	Self-reported adoption of washing hands for 20 seconds using soap and hot water (% of participants who report practicing this behavior "always" after participating in the program).
4	Self reported increase in the adoption of using a thermometer to determine the doneness of food (percentage of participants who report practicing this behavior "always" after participating in the program).
5	Increase in knowledge (percentage of knowledge questions answered correctly) by participants completing the 2-hour food handler course.

Outcome #1**1. Outcome Measures**

FPM Pass/Fail Rate - percentage of participants who pass the DSHS Certified Food Manager exam on the first attempt.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	80	92

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Becoming a Certified Food Manager requires that one pass an exam either written by DSHS or other approved organization.

What has been done

Every individual who participates in our Certified Food Manager program has the opportunity to take (challenge) the Texas DSHS exam. The 75 question exam is typically given at the end of the course. Completing the course is not required to challenge the exam.

Results

Although our goal was for at least 80% of individuals to pass the exam, 92% did so during 2009. This is exceptional for our program given that a large percentage of participants have a high school education or less.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2**1. Outcome Measures**

Self-reported adoption of using a food thermometer to measure internal temperatures of hot/cold foods being held (% of individuals who report practicing this behavior "always" after completing the program)

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	75	83

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Measuring the temperature of foods being held at hot (135 degrees F) or cold (41 degrees F) is the only way to assure that foods are being kept out of the temperature danger zone. Foods (especially those that are potentially hazardous) kept in the temperature danger zone (41-135) longer than 2 hours are at an increased risk for causing a foodborne illness.

What has been done

Educational programs emphasize the importance of using a food thermometer to monitor temperatures; participants who complete the Certified Food Manager program are given a food thermometer to use in their establishments.

Results

The percentage of participants who "always" used a food thermometer to check foods being held at 41 degrees or lower rose from 74% (before) to 95% (after). The percentage of participants who "always" used a food thermometer to check foods being held at 135 degrees or higher rose from 64% (before) to 83% (after).

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #3**1. Outcome Measures**

Self-reported adoption of washing hands for 20 seconds using soap and hot water (% of participants who report practicing this behavior "always" after participating in the program).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	85	90

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Poor personal hygiene, which includes inadequate hand washing, is a major risk factor for foodborne illness.

What has been done

Certified Food Manager courses emphasize the importance of proper personal hygiene with a special emphasize on hand washing.

Results

Before the Certified Food Manager program, 73% of program participants reported that they "always" washed their hands for 20 seconds with soap and hot water. Thirty days after the program ended, that percentage had increase to 90%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #4**1. Outcome Measures**

Self reported increase in the adoption of using a thermometer to determine the doneness of food (percentage of participants who report practicing this behavior "always" after participating in the program).

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	75	82

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Failure to cook foods or re-heat foods to a proper internal temperature can be a major risk factor for foodborne illness. The only way to determine if a food has been cooked to a proper temperature is by using a food thermometer.

What has been done

Participants completing the Certified Food Manager program are instructed on proper cooking temperatures. In addition, participants are given a food thermometer to use in their establishments.

Results

Before the program began, less than half of the program participants surveyed "always" used a food thermometer to determine the doneness of food. Thirty days after the program ended, that percentage rose to 82%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #5**1. Outcome Measures**

Increase in knowledge (percentage of knowledge questions answered correctly) by participants completing the 2-hour food handler course.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	86

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

A large percentage of our food dollar is spent on food eating away from home. It is important that food handler's have the right knowledge and skills necessary to prepare and serve food in a way that does not cause foodborne illness.

What has been done

The food handler's program is a 2-hour food safety program for individuals working directly with food in a retail establishment. This program provides workers with basic food safety knowledge to help reduce the risk of foodborne illness.

Results

1694 individuals completed the pre and post knowledge surveys. On average, participants scored 69% of the questions correctly before the course began. After the course ended, their knowledge score increased significantly to 86%.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Government Regulations
- Competing Public priorities

Brief Explanation

Our outcomes, with respect to the number of people reached and the reported change in knowledge and behaviors, are impacted by several factors. For example, not every county requires that food service employees complete a food handler course; not every retail food establishment requires a certified food manager. Data on the demographics of those who attend our course suggest that nearly half of participants have a high school education or less; because the certified food manager course is a rigorous one and requires a high level of literacy, those with poor reading or test taking skills may score low on the exam or the pre- and post food handler knowledge surveys. Finally, while our evaluations suggest that positive changes in behavior are happening as a result of our program, the extent to which selected behaviors are being followed is based on self-reported data.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)

Evaluation Results

For the Certified Food Manager program, we conducted a retrospective post survey 30 days after the program ended. Of the 1451 individuals who completed the program, 327 individuals participated in the 30-day survey. In addition to the results that have been reported in the defined outcomes section, there were other changes in selected behaviors (based on self-reported data from participants): (1) percentage of participants who used the 2-stage cooling method "always" to cool foods to 41 degrees or below rose from 36% before to 65% after; (2) percentage of participants who "never" handled ready-to-eat foods with their bare hands rose from 47% before to 62% after; and (3) the percentage of participants who "always" clean and sanitize food contact surfaces and utensils between uses rose from 75% before to 91% after.

Key Items of Evaluation

1. Our pass rate for the CFM exam was 92%.
2. In addition to the pass rate for the CFM exam, our program made a number of important improvements in targeted food safety behaviors that can help reduce the risk for foodborne illness (using a food thermometer, handwashing, using the 2-stage cooling method, not touching ready-to-eat foods with bare hands).

V(A). Planned Program (Summary)**Program # 12****1. Name of the Planned Program**

Food and Nutrition Education for Limited Resource Audiences

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	50%		0%	
704	Nutrition and Hunger in the Population	25%		0%	
801	Individual and Family Resource Management	25%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	55.7	0.0	0.0	0.0
Actual	19.7	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
285746	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
285746	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1786153	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Nutrition education will be conducted using a variety of methods including group, individual, media, and newsletters. Group methods will either be single education events that focus on a very specific concept/behavior (e.g. washing fresh produce to reduce the risk of a foodborne illness) or a series of lessons that focus on broader concepts such as label reading or food resource management. Networking with agencies and organizations to expand outreach and identify new audiences will also occur.

NOTE: Some information from this planned program is also included in the program for global food hunger. FTEs and financial data has been split between the two programs based on an estimate of contribution to food hunger related content.

2. Brief description of the target audience

The target audience for the Better Living for Texans program is food stamp recipients and applicants. However, Texas has been granted waivers by USDA/FNS that allow us to extend our program to other limited resource audiences. These audiences include: women receiving WIC benefits, children attending schools in which 50% or more of the children receive free or reduced meals; children and parents in Head Start programs; individuals receiving food at a food bank or food pantry; children who participate in the Summer Food Service Program; and individuals living in census tracts where 50% or more of the population is at 130% of the poverty level or below.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	125000	200000	85000	0
Actual	161372	234139	150196	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	10000	12040

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Teams of BLT participants who enroll in Walk Across Texas will increase the number of miles walked by 15% at the end of the 8 week program.
2	Amount of monthly out-of-pocket food expenses reported saved by program participants.

Outcome #1**1. Outcome Measures**

Teams of BLT participants who enroll in Walk Across Texas will increase the number of miles walked by 15% at the end of the 8 week program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	15	13

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Physical activity is an important part of health promotion and disease prevention. Most adults are not physically active, putting them at risk for chronic disease later in life.

What has been done

Individuals (including youth) who are participating in the BLT program are encouraged to join the Walk Across Texas program. This program is designed to get individuals to begin the habit of regular physical activity. Using a team approach, participants walk, run, bike, or engage in other physically active behaviors to "walk" across the state of Texas.

Results

During 2009, BLT participants reported walking an average of 20 miles per week when the program first began. At the end of the 8 week program, participants were walking an average of 23 miles.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
801	Individual and Family Resource Management

Outcome #2**1. Outcome Measures**

Amount of monthly out-of-pocket food expenses reported saved by program participants.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	40	37

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

For individuals living in poverty, having adequate food resources is important to maintain food security and to purchase foods with the highest nutrient quality.

What has been done

The Better Living for Texans (BLT) program focuses on helping SNAP (formerly food stamp) and SNAP-eligible participants stretch their food dollars while selecting and preparing nutritious meals for them and their family. This was done by using a series of educational sessions that focus on meal planning, stretching food dollars, and food safety (to reduce foodborne illness and food waste).

Results

Individuals who completed our pre, post, and 30-day follow-up survey were asked to report the amount of money they spend out-of-pocket for food. Before the BLT program began, participants reported they spent an average of \$217 per month; at the time the follow-up survey was conducted that dollar figure had dropped to \$180.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Public Policy changes
- Government Regulations
- Other (weather)

Brief Explanation

The continued economic downturn, along with noted rising food costs probably prevented individuals from achieving the original goal for saving 40 per month. However, the finding that participants could cut food costs is encouraging.

Weather may have played a factor in preventing individuals from engaging in physical activity outdoors (very hot summer in 2009) which would have impacted the Walk Across Texas goals. Another possibility could be a lack of safe places to be physically active.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- Before-After (before and after program)

Evaluation Results

In addition to the reduction in out-of-pocket food expenses, we found improvements in a number of behaviors. For example, Most BLT participants initially reported planning their meals either "always" or "sometimes." After the program ended, the % of participants who intended to plan their meals "always" or "sometimes" jumped to nearly 99% with more participants indicating that they intended to plan their meals "always" (up from 27% pre to 65% post). Thirty days later, the percentage of participants who "always" planned their meals dropped to 54% but that was still twice what was reported at the beginning of the program. Overall, 97% of participants were engaged in this behavior at least "sometimes" and the number of participants who "never" planned their meals fell from 71 (8.5%) to 17 (2%).

Another behavior that saw improvement was in the area of food safety. Washing cutting boards, knives and counter tops after cutting up raw meat or poultry is a practice that should be done "always." Yet at the beginning of the BLT program, only 89% (n=745) were doing so. Immediately after the program ended, 794 participants (95%) reported intent to practice this behavior "always;" a figure that was sustained 30 days later. The percentage who "never" followed this practice fell from 2% (n=15) to 7 (0.8%).

Finally, improvements were seen in the use of food labels to select foods low/moderate in fat. Initially, nearly 39% of the participants reported using label information about fat either "always" or "almost always" when shopping for food. That percentage rose to 72% immediately after the series ended and continued to climb to 78% when the participants were contacted for the follow-up survey. The percentage of those who never used this information fell from 26% pre to approximately 4% follow-up.

Key Items of Evaluation

Reduction in out-of-pocket food expenses, increase in physical activity, use of food label when shopping for food.

V(A). Planned Program (Summary)**Program # 13****1. Name of the Planned Program**

Livestock and Meat Quality, Safety, and Productivity

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	10%		10%	
302	Nutrient Utilization in Animals	25%		25%	
303	Genetic Improvement of Animals	5%		5%	
306	Environmental Stress in Animals	5%		5%	
307	Animal Management Systems	20%		20%	
308	Improved Animal Products (Before Harvest)	20%		20%	
313	Internal Parasites in Animals	5%		5%	
315	Animal Welfare/Well-Being and Protection	10%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	56.1	0.0	25.0	0.0
Actual	46.2	0.0	27.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
671830	0	1272915	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
671830	0	2649939	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
4199504	0	4149960	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Research as well as group and individual education will be ongoing across the 7 key subject matter/commodity areas. Projects run the gamut from molecular biology to applied technologies. Key foci of research include lowering the cost of production

through improvement of efficiency as well as development of systems and data to assist producers to add value to commodities by differentiation of products and processes. Methods of education include public meetings, individual support, printed and video/DVD materials and web-based materials. Collaboration with breed associations, commodity groups and corporations will target research and educational needs of a diverse livestock industry across the state, involving both youth and adults.

2. Brief description of the target audience

The target audience is composed of beef cattle, horse, dairy, sheep, goat and swine producers/owners/users, commodity group leadership, associations and registries, and youth enrolled in 4-H and FFA livestock projects.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	65000	500000	10000	0
Actual	89294	320554	14678	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 1

Actual: 2

Patents listed

* Marek's Disease Virus Vaccine: Compositions and Methods of Using Thereof

* Quantitative Trait Loci and Somatostatin

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	10	275	
Actual	17	470	487

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	2750	1744

Output #2

Output Measure

- # of research-related projects.

Year	Target	Actual
2009	105	109

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of livestock owners/producers that adopt or plan to adopt best management practices to improve quality and profitability.
2	% of livestock owners/producers/commodity group representatives that report increased knowledge of best management practices to improve quality and profitability.
3	% of livestock owners/producers that report a savings in money or increased profit by best management practices adopted.

Outcome #1**1. Outcome Measures**

% of livestock owners/producers that adopt or plan to adopt best management practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	62

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Best management practices to ensure quality, profitability, productivity and optimal utility help clientele make changes to improve livestock, management, resources and time to increase income and improve profit opportunities.

What has been done

Programs conducted include Texas Beef Quality Producer, Cowboy Beef Quality Assurance, Beef 101, 706, 2010, Bull Selection, Drought Management, Horse 101, Mare Foal Workshops and Dairy Outreach. Youth programs: 36th Summer Horsemanship Schools, Lamb/Goat Camps and Judging Camps.

Results

From measures including beef cattle, meats, dairy, sheep/goats and horses, 65% to 100% reported adoption of at least one best management practice. 50% to 100% reported elimination of non-productive practices. 58% implemented financial plans, 66% drought plans, 60% hay analysis, 85% adopted EPD's and fertility testing 80% reported use of cost/lb of nutrient strategies for alternative feedstuffs and 90% body condition scoring as a management tool.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection

Outcome #2**1. Outcome Measures**

% of livestock owners/producers/commodity group representatives that report increased knowledge of best management practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	70	82

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Increased knowledge prompts adoption of best management practices to ensure quality, profitability, productivity and utility of livestock, management, resources and time. Knowledge of best management prompts time savings, increased confidence in management decisions and problem solving for producer and youth involved in the livestock industry.

What has been done

Programs were conducted and evaluated for both large and small scale producers/owners and youth who produce, own, market and enjoy livestock.

Results

65% to 90% reported improved decision-making ability. 75% to 100% reported increased confidence in management and use. 80% had knowledge gains of 40 to 65% for cattle handling, record keeping, foodsafety control, environmental management, livestock evaluation and general management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection

Outcome #3**1. Outcome Measures**

% of livestock owners/producers that report a savings in money or increased profit by best management practices adopted.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	10	13

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Animal management system must go beyond striving to improve quality of life, quality of production and increased knowledge to achieve a significant outcome. For production systems to survive they must reduce costs, increase profit or both.

What has been done

Economic benefit was measured from the Beef Cattle Short Course, Texas Beef Quality Assurance, Southwest Beef Symposium, drought management, dairy and horse programs

Results

Of the participants in the newly launched BQA online program 100% felt the adoption of management practices would increase income and estimated that income to be approximately \$65 per head. Throughout the year participants in four Beef 706 programs estimated savings of \$20 to \$45/head with total savings between \$1.5 and \$21 million. 80% of participants in horse management programs indicated they would save money as a result of the knowledge gained in the program. Southwest Beef Symposium valued at \$405/person attending. Cattle producers reported saving \$12 to \$35/weaned calf and 85% said knowledge gained in livestock handling and managing input costs saved \$67/head. 50% of dairy producers and 95% of Beef Cattle Conference participants expected savings from adoption of practices. Drought management practices produced returns of \$78/ cow.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
313	Internal Parasites in Animals

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Factors affecting the economic returns and plans to adopt management practices could have been affected by the severe drought throughout the majority of the state during 2009. The economy, increasing cost of governmental regulations, depressed markets lowered the expected economic returns and affect producers plan to adopt among some producers particularly within the dairy sector.

V(I). Planned Program (Evaluation Studies and Data Collection)**1. Evaluation Studies Planned**

- Before-After (before and after program)

Evaluation Results**Key Items of Evaluation**

V(A). Planned Program (Summary)**Program # 14****1. Name of the Planned Program**

Life Skills for Youth

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	64.4	0.0	0.0	0.0
Actual	100.9	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1467264	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1467264	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
9171643	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

This program is based on five learning experiences, of a minimum of 30 minutes each, tied to the work of the project for which they participate. Each project is experience focused. Examples of activities include workshops, demonstrations, and hands-on experiences.

Numerous materials and support is provided by the Texas 4-H faculty to agents and specialists. These items are used for implementation of projects and for professional development of staff. Use of volunteers is significant in enhancing and extending efforts to reach and provide youth with positive experiences.

2. Brief description of the target audience

All youth of 4-H age are targeted for programs depending on location, issues identified by the local communities, and programs of interest.

V(E). Planned Program (Outputs)**1. Standard output measures**

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	120000	425000	250000	0
Actual	37685	278067	239182	0

2. Number of Patent Applications Submitted (Standard Research Output)**Patent Applications Submitted**

Year: 2009

Plan: 0

Actual: 0

Patents listed**3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

2009	Extension	Research	Total
Plan	15	0	
Actual	0	0	0

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- # of group educational sessions conducted.

Year	Target	Actual
2009	50000	8642

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of youth who increase knowledge of life skills concepts and practices.
2	% of youth who report they have adopted life skills concepts and practices.
3	% of youth who plan to pursue higher education interest or career interest as a result of their project work.

Outcome #1**1. Outcome Measures**

% of youth who increase knowledge of life skills concepts and practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	70	70

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

It is important for young people to develop and gain leadership and life skills as youth to grow into successful, contributing members of society in adulthood. The 4-H & Youth Development program prides itself on teaching these leadership skills to youth involved in the program. Opportunities to develop these skills are available at numerous activities and events conducted at the county, district, and state levels.

What has been done

Numerous programs are conducted throughout the year teaching life skill development. These include camps, workshops and content driven programs in the areas of animal science, leadership, gardening, science, etc.

Results

- (91.46%) respondents indicated they feel more confident in serving in leadership roles.
- (90.36%) respondents indicated they feel more comfortable working in a team.
- (90.24%) respondents indicated they feel more confident in interacting with others.
- (86.59%) respondents indicated they feel more confident in their understanding of dining etiquette.
- (81.93%) respondents indicated they feel more confident in speaking with others.
- (81.93%) respondents indicated they feel more confident in making decisions.
- (80.72%) respondents indicated they feel more confident in their abilities as a leader.
- (76.83%) respondents indicated they feel more confident in their understanding of other cultures.
- 54 of 82(65.85%) respondents indicated they feel more confident in their understanding of financial aid.
- 50 of 83(60.24%) respondents indicated they feel more comfortable public speaking.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2**1. Outcome Measures**

% of youth who report they have adopted life skills concepts and practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	50	50

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

It is important for young people to develop and gain leadership and life skills as youth to grow into successful, contributing members of society in adulthood. The 4-H & Youth Development program prides itself on teaching these leadership skills to youth involved in the program. Opportunities to develop these skills are available at numerous activities and events conducted at the county, district, and state levels.

What has been done

Numerous programs are conducted throughout the year teaching life skill development. These include camps, workshops and content driven programs in the areas of animal science, leadership, gardening, science, etc.

Results

Significant increases or changes in behavior are noted in the following areas:

- team work
- leadership
- public speaking
- community service
- pride of communities
- listening to others

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3**1. Outcome Measures**

% of youth who plan to pursue higher education interest or career interest as a result of their project work.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Competing Programmatic Challenges

Brief Explanation

The 4-H Program has recently went through significant restructuring in an effort to provide more effective support to counties. This has led to some programmatic challenges.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

Evaluation Results

Entered in previous section.

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 15****1. Name of the Planned Program**

Crop and Forage Production Systems

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%		10%	
202	Plant Genetic Resources	10%		10%	
205	Plant Management Systems	20%		20%	
211	Insects, Mites, and Other Arthropods Affecting Plants	10%		10%	
212	Pathogens and Nematodes Affecting Plants	10%		10%	
213	Weeds Affecting Plants	10%		10%	
216	Integrated Pest Management Systems	30%		30%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	58.1	0.0	99.0	0.0
Actual	65.7	0.0	95.9	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
955394	0	3693929	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
955394	0	10975003	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
5972021	0	15442721	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Provide training and program materials to County Extension Agents to conduct educational programs at the county level. Technical assistance is provided to agents by specialists in the area of result demonstrations and applied research. Provide multi-county, regional and statewide educational programs via specialist faculty to various stakeholders. Coordinate and

collaborate with state and federal agencies in crop and forage activities.

A primary research response is to utilize advanced molecular and traditional breeding systems to develop improve the genetics of crops of economic importance. Research also seeks to improve irrigation efficiency and to reduce dependence on crop protection chemicals.

2. Brief description of the target audience

The target audience for this program consists of agricultural producers who produce food, fiber, and forages in the state. Specific focus is on those commodities listed in the program overview. In addition, these programs are interpreted to the urban public through various methods.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	67500	240000	3000	0
Actual	57072	0	5119	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 5

Actual: 13

Patents listed

- * TAM 401 Wheat
- * Stem-Regulated, Plant Defense Promoter and Uses Thereof in Tissue-Specific Expression in Monocots
- * Method for Generating Informative DNA Templates for High-Throughput Sequencing Applications
- * Multispectral Natural Fiber Quality Sensor for Real-Time In-Situ Measurement
- * Methods of Using Plant Sterols to Control Phleom Feeding Insects
- * Discovery and Utilization of Sorghum Genes (MA5/MA6)
- * Enhanced Gene Expression from Virus-Based Gene Vectors by the Use of Satellite Panicum Mosaic Virus (SPMV) Coat Protein
- * Uses of Bran From Tannin and Black Sorghum as a Cocoa Extender and Natural Colorant
- * Intergeneric Hybrid Plants and Methods for Production Thereof
- * Methods of Intergeneric Hybrid Production
- * Plants and Seeds of Sorghum Line TX3361
- * Methods and Compositions for Intergeneric Hybrid Plant Transformation
- * TAMO 406 Oat

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	750	
Actual	19	857	876

V(F). State Defined Outputs

Output Target

Output #1**Output Measure**

- # of group educational sessions conducted.

Year	Target	Actual
2009	3000	2584

Output #2**Output Measure**

- # of research-related projects.

Year	Target	Actual
2009	175	194

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of crop and forage producers that adopt or plan to adopt best management practices to improved quality and profitability.
2	% of crop and forage producers that report increased knowledge of best management practices to improve quality and profitability.

Outcome #1**1. Outcome Measures**

% of crop and forage producers that adopt or plan to adopt best management practices to improved quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	40	80

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Sustainability in Texas agriculture requires rapid adoption of new technologies to cope with harsh climatic conditions (we had record heat and drought in 2009), a variety of pests as well as uncertain prices for commodities and inputs.

What has been done

Two examples detail how AgriLife Research and Extension have aggressively deployed new technology developed either by AgriLife scientists or industrial partners have aggressively demonstrated the value of new traits to wheat and cotton farmers, resulting in tens of millions dollars of impact to Texas farmers.

Results

New genetics developed in part by AgriLife Research and demonstrated by AgriLife Extension had a major impact on the income of Texas farmers. In 2009, one wheat variety, TAM 111 had an impact of \$10.7 million more than its replacement. New cotton varieties and production systems demonstrated by AgriLife Extension have had more than a \$590 million impact over the last decade, increasing yields from 390 to 860 pounds per acre.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #2**1. Outcome Measures**

% of crop and forage producers that report increased knowledge of best management practices to improve quality and profitability.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	80	110

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

More than half of the expense of maintaining a cow-calf herd is attributable to the cost of forage and feed. As about 70% of the weight of Texas cattle is forage based, the cost of managing forage is very significant to Texas livestock producers.

What has been done

Many educational meetings conducted by Extension feature education on forage and hay management. We will use an example of a forage clinic held in Karnes County, Texas to illustrate the knowledge transfer on forage management by Extension programming.

Results

Forage producers indicated dramatic increases in knowledge of forage management principles including overall management (119% increase), nutrient management and soil fertility and soil sampling (110% increase) and forage and hay testing (145% increase).

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
202	Plant Genetic Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)
- Other (widespread drought, record heat)

Brief Explanation

The Gulf Coast, Central and South Texas experienced a record drought and high temperatures. Crops and forages either failed entirely or were a small fraction of normal production in approximately 100 counties. Many research and extension activities were re-focused due to the extreme climatic conditions.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- Case Study
- Other (NASS survey)

Evaluation Results

AgriLife maintains broad breeding efforts in major crops to supply the genetics needed to provide the tools farmers need to keep yield levels competitive. Examples include the impact of development, release and Extension programming about TAM 111 wheat. Over a period of 4 years, this stress and pest tolerant, high yielding wheat has replaced millions of acres of other varieties on the Great Plains, moving from a handful of acres to first, second and third place in planted acres in Texas, Kansas and Colorado respectively (1.6 million acres). Research delivered an excellent product and extension programming and field testing allowed wheat farmers to understand the value of this variety. It is estimated that in Texas alone, farmers received a \$10.7 million impact by replacing older varieties of wheat with newer AgriLife releases in 2009. Rice lines, corn germplasm and sorghum germplasm with similar economic values are all in final evaluation for release. Five new crop varieties were submitted for plant variety protection in 2009.

With the rapid adoption of new transgenic traits in cotton beginning about 2000, Texas farmers have seen a dramatic increase in yield and a corresponding increase in cotton fiber quality. To make farmers aware of the best varieties to cope with the production risk in the Texas High Plains, Extension has used a variety of educational tools:

More than 10,000 cotton producers participated in 250 educational meetings conducted by Extension in the High Plains since 2000.

Over 3,000 hard copies of trial results have been disseminated to producers, consultants and cotton gins since 2001. More than 22,000 requests for these reports have been noted on the Lubbock AgriLife Research and Extension Center Web site. An additional 9,000 Cotton Resource CDs and DVDs have been disseminated to producers, consultants and gins. These CDs and DVDs have provided a total of 57,000 annual report

copies to recipients, bringing the total number of reports distributed to more than 80,000 since 2001.

Economic benefit

Improved seed technology and variety testing efforts have led to significant improvements in both cotton lint quality, and yields in the High Plains. Since 2000, the improved lint quality has resulted in a \$0.085 per pound increase in loan value, while average yields have increased from 390 to 860 pounds per acre.

The economic benefit of these advancements in seed technology, applied research and education were estimated based on improved loan values and yields, adjusted for certain costs associated with these improvements. In 2007, the economic benefit to growers was estimated at \$32 million. Since 2000, the cumulative economic benefit was estimated at \$590 million, which has put growers in a better position to absorb the sharp increases in production costs.

A forage management seminar was held for forage/beef producers in Karnes and Wilson counties. Seventy-five people were in attendance. Topic discussed included basic forage management principles, fertility, forage/hay testing, and soil sampling.

Prior to the presentation, only 36% of the participants considered their level of understanding in forage management principles to be in the good to excellent range. Following the presentation, 79% of the participants considered their level of understanding of forage management principles to be either in the good to excellent range. This represents a 119% change in level of understanding when comparing the before and after result

Prior to the presentation, only 43% of the participants considered their level of understanding in fertility to be in the good to excellent range. Following the presentation, 84% of the participants considered their level of understanding of fertility to be either in the good to excellent range. This represents a 95% change in level of understanding when comparing the before and after results.

Prior to the presentation, only 41% of the participants considered their level of understanding in soil sampling to be in the good to excellent range. Following the presentation, 86% of the participants considered their level of understanding of soil sampling to be either in the good to excellent range. This represents a 110% change in level of understanding when comparing the before and after results.

Prior to the presentation, only 29% of the participants considered their level of understanding in forage/hay testing to be in the good to excellent range. Following the presentation, 71% of the participants considered their level of understanding of forage/hay testing to be either in the good to excellent range. This represents a 145% change in level of understanding when comparing the before and after results.

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 16****1. Name of the Planned Program**

Child Passenger Safety

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
723	Hazards to Human Health and Safety	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	5.6	0.0	0.0	0.0
Actual	3.6	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
52350	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
52350	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
327234	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

County Extension agents and law enforcement officers trained and certified as child passenger safety technicians will conduct child safety seat checkup events in under-served rural areas of Texas. In addition, child safety seat fitting stations have been established at county Extension offices and fire/EMS departments to allow families additional access to certified technicians. When needed, a replacement seat is issued at no charge to parents and caregivers at checkup events and fitting

2. Brief description of the target audience

Under-served residents of rural areas in Texas.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	3000	7000	1600	0
Actual	10630	18174	10936	0

2. Number of Patent Applications Submitted (Standard Research Output)**Patent Applications Submitted**

Year: 2009

Plan: 0

Actual: 0

Patents listed**3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

2009	Extension	Research	Total
Plan	0	0	
Actual	0	0	0

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- # of group education sessions conducted.

Year	Target	Actual
2009	350	443

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of car seats inspected.

Outcome #1**1. Outcome Measures**

of car seats inspected.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	1500	2430

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Traffic crashes are the leading cause of death for children 3-14 years of age. Almost 1/2 of children killed in vehicle crashes were unrestrained. Minority children are at a greater risk of being unrestrained. Of the 13500 child safety seat inspections done by our project team over the years, 99 percent are not used correctly.

What has been done

With funding primarily from the Texas Department of Transportation, project personnel and other volunteer certified child safety seat technicians, supervised over 2430 inspections. Project personnel trained 35 people as certified child passenger safety technicians.

Results

In 2009, the project supervised over 2430 inspections and distributed more than 1640 new child safety seats. The proper use of child safety seats reduces the risk of injury and death, leading to reduced medical costs, avoidance of lost future earnings, and improved quality of life. In 2009, the economic benefits were estimated to be \$1974 per child 0-4 and \$2318 per child age 4-7 for new seats distributed and \$550 per child for corrected seat misuse.

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Public Policy changes
- Other ()

Brief Explanation

Project is very successful and exceeded their predicted numbers reached. Almost all of their events are held in locations convenient to for underserved, rural families.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

In 2009 the project supervised over 2430 inspections and distributed more than 1640 child safety seats. The trained 35 participants as certified child passenger safety technicians.

Key Items of Evaluation

In 2009, the project personnel supervised over 2430 inspections and distributed more than 1640 new child safety seats. To date, the Passenger Safety Project has supervised over 13500 child safety seat inspections which has resulted in an estimated \$15.7 million in economic benefits to society.

V(A). Planned Program (Summary)**Program # 17****1. Name of the Planned Program**

Cancer Risk Reduction and Early Detection

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
723	Hazards to Human Health and Safety	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890
Plan	2.2	0.0	2.4	0.0
Actual	1.9	0.0	1.9	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
27629	0	17172	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
27629	0	15202	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
172707	0	215920	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

County Extension educators are provided an annual opportunity to apply for funding that will allow them to purchase educational resources such as pedometers to increase the number of children walking in Title One schools, ultraviolet beads and other materials to detect sun exposure at Farm Safety Days, health fairs, and similar activities, exhibits such as the one for Put It Outside to be used at health and parenting fairs, Hallelujah to Health exhibits and other materials for use in African American churches, Towards No Tobacco curriculum and workbooks, etc.

Research will develop and enhance early detection methodologies for cancer and investigate the preventive properties of vegetables and healthful diets.

2. Brief description of the target audience

Under-served rural residents of Texans who are at risk for cancer.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	2350	6000	1500	0
Actual	397	1120	153	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan: 0

Actual: 4

Patents listed

*Composition and Methods for Preventing and Monitoring Disease

*A Phytochemical-Rich Oil From Acai Fruit and Fruit By-Products

*Methods for Detecting Colorectal Diseases and Disorders

*Non-Invasive Detection of Candidate Molecular Biomarkers for Colorectal Diseases

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan	0	15	
Actual	0	30	30

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of education sessions conducted.

Year	Target	Actual
2009	190	17

Output #2

Output Measure

- # research-related projects.

Year	Target	Actual
------	--------	--------

2009

4

7

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	# of kids who intend to not use tobacco based on signing a 'No Tobacco' contract.

Outcome #1

1. Outcome Measures

of kids who intend to not use tobacco based on signing a 'No Tobacco' contract.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Other (This project is no longer funded. The Texas Department of State Health Services is now doing all tobacco control.)

Brief Explanation

This project is no longer funded. The Texas Department of State Health Services is now doing all tobacco control.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

No longer doing tobacco control because the Texas Department of State Health Services is now doing all tobacco control in Texas.

Key Items of Evaluation

No longer doing tobacco prevention.

V(A). Planned Program (Summary)**Program # 18****1. Name of the Planned Program**

Family Financial Security

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	100%		0%	
	Total	100%		0%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890

Actual	4.7	0.0	0.0	0.0
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2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
68346	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
68346	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
427222	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Two family financial security initiatives are described in this report: 1) Money Smart, and 2) Wi\$eUp - Financial Planning for Generation X and Y Women. Money Smart is a 10-part financial management program developed by the Federal Deposit Insurance Corporation (FDIC) and adopted for implementation by Texas AgriLife Extension. The curriculum helps individuals build basic financial knowledge, develop financial confidence, and use banking services effectively. Wi\$eUp is an 8-module financial education curriculum offered online and in classrooms/community settings nationally. Texas AgriLife Extension developed the Wi\$eUp curriculum and manages the website and database management system under contract with the U.S. Department of Labor - Women's Bureau.

2. Brief description of the target audience

Money Smart is targeted to adults outside the financial mainstream, typically known as the "unbanked" and those with low financial knowledge and skills. Extension educators and Extension-trained volunteers in Texas have used the program with a

variety of Texans, including Habitat for Humanity families, recent immigrants, Head Start parents, and participants of drug rehab programs. Money Smart classes have also reached clients through various community organizations, including Crisis Centers, Pregnancy Resources Center, Volunteers of America, housing programs, Foundation Communities VITA tax sites, court-ordered probationers, and school parent groups. Wi\$eUp targets Generation X and Y women, with special emphasis on the 22-35 year old group. The program has reached military service members in Iraq and Afghanistan, Native American women, Head Start staff and parents, and local/regional partner organizations who cooperate with the USDoL-Women's Bureau and Texas AgriLife Extension.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual	12662	27865	908	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan:

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan			
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	{No Data Entered}	787

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Money Smart: # increase in practices adopted.
2	Wi\$eUp: # reduce debt and increase savings.

Outcome #1**1. Outcome Measures**

Money Smart: # increase in practices adopted.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	86

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Increased financial knowledge enhances future financial security and is of interest to individuals and families themselves as well as to external stakeholders, including policymakers, educators, financial professionals, and taxpayers. Failure to achieve financial security has serious consequences for families, communities, and potentially, for taxpayers.

What has been done

Fourteen Texas counties utilized Money Smart in their financial education programming in 2009.

Results

In 2009, 14 Texas counties made 2,588 educational contacts by conducting 260 educational sessions. Changes in financial management practices included opening checking and savings accounts, beginning to reconcile checking accounts, using a spending plan, taking actions to restore credit, and now saving money. Money Smart classes were offered in Brazos County via partnerships with the Brazos County Adult Probation Department and the IDA program with the United Way of the Brazos Valley and Citibank. A 10-session lunch-and learn series was offered twice during the year to adult probationers, resulting in 333 educational contacts. In addition to the knowledge gained and changes in attitudes consistent with past programs, anecdotal evidence suggests the program was effective with this audience. One participant shared that she was enjoying learning concepts she had learned before and was working to repair her credit. Her employer is interested in participating after hearing about the classes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #2**1. Outcome Measures**

Wi\$eUp: # reduce debt and increase savings.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	69

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Increased financial knowledge and adoption of certain financial practices by women would enhance future financial security and are of interest to individuals and families themselves as well as to external stakeholders, including policymakers, educators, financial professionals, and taxpayers. Failure to achieve financial security has serious consequences for families, communities, and potentially, for taxpayers.

What has been done

Wi\$eUp was developed as a national curriculum by Texas AgriLife Extension through a partnership and contract with the U.S. Department of Labor - Women's Bureau. It is available both as an online course and as a workshop/classroom-facilitated series. The scope and outreach nationally is extensive. In 2008, a special Texas AgriLife Extension pilot replication of Wi\$eUp was conducted by 10 counties and was continued in 2009. Wi\$eUp has two national partners (American Institute of Certified Public Accountants and the Financial Planning Association), a dedicated website (<http://wiseupwomen.tamu.edu>), over 100 financial experts who respond to questions, bi-monthly national teleconferences, and a quarterly eNews publication. Assessment tools include pre and post-assessments and a 3-month post assessment tool.

Results

Since the program began in 2004, more than 19,000 persons nationwide have participated in the program, about evenly divided between the online course and attending classes/workshops. Wi\$eUp reached 542 Texans during calendar year 2009. 69 percent of participants in programs led by Texas AgriLife educators reported reducing their debt since taking Wi\$eUp, compared to 54 percent of all Wi\$eUp participants nationwide. 62 percent of Extension participants increased savings or investments for retirement or other purposes, compared to 49 percent of all Wi\$eUp participants nationwide. Overall 86 percent of all participants made at least one positive changes in savings habits.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy

Brief Explanation

The changing economic environment in the U.S. during this recession has focused attention on the need for financial education and information as unemployment has increased, credit has tightened, and foreclosures have increased nationwide.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- Time series (multiple points before and after program)

Evaluation Results

Wi\$eUp: Evaluation procedures include pre, post and 3-month post assessment. Rate of return on 3-month post assessment is 13%. Sixty-nine percent of participants in programs conducted by Texas AgriLife Extension reported reducing their debt since taking the Wi\$eUp course, compared to 54 percent of all participants who responded to the three-month assessment. Sixty-two percent of the Extension participants reported increasing their savings or investments for retirement or other purposes, compared to 49 percent of all participants nationwide. Overall, 86 percent of both groups made at least one positive change in their savings habits. Since its inception, the Wi\$eUp website (including the online course) has had 196,220 unique visitors and over 1.7 million page views. In 2009, there were 55,144 unique visitors and 693,809 page views, accounting for 28 percent of all unique visitors and 40 percent of all page views captured in just one year, suggesting that current economic conditions drew more people to seek out financial information and education online.

Money Smart: For several years, participant evaluations have been analyzed to determine knowledge gained, skills learned, and intent to change financial management behaviors. Results consistently show a statistically significant increase in participants' knowledge of the program's concepts after the class compared to their knowledge before the class. In 2009, a pre and post survey were introduced to determine any changes in participants' financial management practices and attitudes toward money as a result of participating in Money Smart classes. Participants have reported adoption of several recommended financial management practices and improvement in their attitudes toward money over the 5-10 week series, including improvement in the frequency with which bills are paid on time, increased savings, opening of savings and checking accounts, and developing a plan for spending.

Wi\$eUp: Evaluation procedures include pre, post and 3-month post assessment. Rate of return on 3-month post assessment is 13%. Sixty-nine percent of participants in programs conducted by Texas AgriLife Extension reported reducing their debt since taking the Wi\$eUp course, compared to 54 percent of all participants who responded to the three-month assessment. Sixty-two percent of the Extension participants reported increasing their savings or investments for retirement or other purposes, compared to 49 percent of all participants nationwide. Overall, 86 percent of both groups made at least one positive change in their savings habits. Since its inception, the Wi\$eUp website (including the online course) has had 196,220 unique visitors and over 1.7 million page views. In 2009, there were 55,144 unique visitors and 693,809 page views, accounting for 28 percent of all unique visitors and 40 percent of all page views captured in just one year, suggesting that current economic conditions drew more people to seek out financial information and education online.

Key Items of Evaluation

Money Smart: Findings from retrospective post: Increases in knowledge scores were significantly greater among the Spanish speakers than the English speakers for the Money Matters and Borrowing Basics classes. There was no significant difference for the Pay Yourself First class.

Wi\$eUp: The rate of return on three-month post-assessments rose by two percentage points in 2009 over the previous year. This was a direct result of additional training for non-Extension partners.

V(A). Planned Program (Summary)**Program # 19****1. Name of the Planned Program**

Global Food Security and Hunger

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
704	Nutrition and Hunger in the Population	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890

Actual	19.7	0.0	0.0	0.0
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2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
285746	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
285746	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1786153	0	0	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**AgriLife Extension

Nutrition education will be conducted using a variety of methods including group, individual, media, and newsletters. Group methods will either be single education events that focus on a very specific concept/behavior (e.g. washing fresh produce to reduce the risk of a foodborne illness) or a series of lessons that focus on broader concepts such as label reading or food resource management. Networking with agencies and organizations to expand outreach and identify new audiences will also occur.

AgriLife Research

Research led by the Borlaug Center assists developing nations to develop sustainable food production and distribution systems to improve the quantity and quality of food. Both basic and applied research benefit vulnerable populations through breeding improved varieties of crops, breeds of livestock, and development of sustainable production and distribution systems.

NOTE: Some information from this planned program is also included in the program for food and nutrition education. FTEs and financial data has been split between the two programs based on an estimate of contribution to food hunger related related content.

2. Brief description of the target audience

AgriLife Extension

The target audience for the Better Living for Texans program is food stamp recipients and applicants. However, Texas has been granted waivers by USDA/FNS that allow us to extend our program to other limited resource audiences. These audiences include: women receiving WIC benefits, children attending schools in which 50% or more of the children receive free or reduce meals; children and parents in Head Start programs; individuals receiving food at a food bank or food pantry; children who participate in the Summer Food Service Program; and individuals living in census tracts where 50% or more of the population is at 130% of the poverty level or below.

AgriLife Research

The target audiences for this program are national and international governmental and non-governmental groups that seek to alleviate hunger at home and abroad.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual	161372	234139	150196	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan:

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan			
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # of group educational sessions conducted.

Year	Target	Actual
2009	{No Data Entered}	12040

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Amount of monthly out-of-pocket food expenses reported saved by program participants.

Outcome #1**1. Outcome Measures**

Amount of monthly out-of-pocket food expenses reported saved by program participants.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	37

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

For individuals living in poverty, having adequate food resources is important to maintain food security and to purchase foods with the highest nutrient quality.

What has been done

The Better Living for Texans (BLT) program focuses on helping SNAP (formerly food stamp) and SNAP-eligible participants stretch their food dollars while selecting and preparing nutritious meals for them and their family. This was done by using a series of educational sessions that focus on meal planning, stretching food dollars, and food safety (to reduce foodborne illness and food waste).

Results

Individuals who completed our pre, post, and 30-day follow-up survey were asked to report the amount of money they spend out-of-pocket for food. Before the BLT program began, participants reported they spent an average of \$217 per month; at the time the follow-up survey was conducted that dollar figure had dropped to \$180.

NOTE: This data is also reported under the planned program 'Food and Nutrition Education for Limited Resource Audiences'.

4. Associated Knowledge Areas

KA Code	Knowledge Area
704	Nutrition and Hunger in the Population

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Economy
- Public Policy changes
- Government Regulations

Brief Explanation

The continued economic downturn, along with noted rising food costs probably prevented individuals from achieving the original goal for saving 40 per month. However, the finding that participants could cut food costs is encouraging.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

In addition to the reduction in out-of-pocket food expenses, we found improvements in a number of behaviors. For example, Most BLT participants initially reported planning their meals either "always" or "sometimes." After the program ended, the % of participants who intended to plan their meals "always" or "sometimes" jumped to nearly 99% with more participants indicating that they intended to plan their meals "always" (up from 27% pre to 65% post). Thirty days later, the percentage of participants who "always" planned their meals dropped to 54% but that was still twice what was reported at the beginning of the program. Overall, 97% of participants were engaged in this behavior at least "sometimes" and the number of participants who "never" planned their meals fell from 71 (8.5%) to 17 (2%).

NOTE: This data is also reported under the planned program 'Food and Nutrition Education for Limited Resource Audiences'.

Key Items of Evaluation

V(A). Planned Program (Summary)**Program # 20****1. Name of the Planned Program**

Childhood Obesity

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
724	Healthy Lifestyle	100%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890

Actual	3.9	0.0	0.4	0.0
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2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
56124	0	130863	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
56124	0	77234	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
350822	0	129918	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**Balancing Food & Play

The curriculum contains three elements: lesson plans, take-home reading assignments, and student journals.

Twenty lesson plans address physical activity, MyPyramid, making healthy choices, and goal setting.

The lessons incorporate higher-level thinking and learning skills (i.e., opportunities to design games, commercials, menus).

Eight take-home reading assignments and parent letters encourage family engagement by providing the opportunity for shared family discussions.

The reading assignments follow a fictional family as they learn about nutrition and physical activity, set goals, and learn to

make healthy choices.

Each student receives a 41-page journal. The journal allows opportunities for reflective learning and goal setting.

The program evaluation includes child surveys regarding knowledge and behavior.

WAT Youth Component

A local coalition will recruit participants and provide leadership to implement Walk Across Texas! Teams of eight or classes of children at schools will be recruited to walk for eight weeks. Teams and classes are challenged to walk regularly for eight weeks, reporting their mileage on <http://walkacrosstexas.tamu.edu>, to achieve the goal of walking the approximate 830 miles across Texas on a map that allows comparisons of teams and class progress.

AgriLife Research

Research is conducted in collaboration with State and Federal Women, Infant and Children Program leaders to provide data and programs to improve dietary habits of children and their parents or care givers. Research also involves native American populations and the school lunch program.

NOTE: Some information from this planned program is also included in the program for exercise and wellness. FTEs and financial data has been split between the two programs based on an estimate of contribution to youth related content.

2. Brief description of the target audience

Balancing Food & Play

Third grade students in various Texas schools.

WAT Youth Component

Youth in Texas Schools

AgriLife Research

Parents and others who care for children, school lunch program administrators, and native Americans.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual	9793	15015	42869	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan:

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
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Plan			
Actual	0	3	3

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- # youth participating in WAT Program.

Year	Target	Actual
2009	{No Data Entered}	19759

Output #2**Output Measure**

- # research related projects.

Year	Target	Actual
2009	{No Data Entered}	2

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increased number of miles walked by youth during the WAT Eight Week Program

Outcome #1**1. Outcome Measures**

Increased number of miles walked by youth during the WAT Eight Week Program

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	1315836

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

In Texas, 23 percent of fourth-grade children are obese (95th percentile for BMI by age/sex). Childhood obesity is associated with an increased risk for diabetes, high blood pressure, and adult overweight/obesity. About 1/3 of Texas children do not get the recommended amount of 60 minutes of physical activity each day. Texas 2009 FITNESSGRAM data from the Cooper Institute indicate that children's fitness levels decline with each passing grade.

What has been done

Walk Across Texas! is an eight-week program, offered in Texas since 1996, to help people of all ages support one another to establish the habit of regular physical activity. Walk Across Texas! is recognized as a Best Practice Physical Activity Program by the Texas Department of State Health Services. In 2009, Texas AgriLife Extension Service and Texas Education Agency (TEA) partnered to offer the first annual TEA/Independent School District Walk Across Texas! Challenge. The goal of the challenge was to motivate Texas Education Agency, Independent School District(ISD) employees, students, and their families to move more and have fun!

Results

47 Texas counties had schools participate in the TEA/ISD Walk Across Texas! Challenge. 662 school youth logged 573,843 miles. The total number of school age youth participating in Walk Across Texas! for the year, however, was 19,759 logging 1,315,836 miles.

4. Associated Knowledge Areas

KA Code	Knowledge Area
724	Healthy Lifestyle

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Appropriations changes
- Public Policy changes
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

Various factors including those listed above can have an impact on this program area.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

Balancing Food & Play

At the completion of the curriculum, behavior changes included:

The percentage of students who reported "Always or Almost Always" drinking regular (non-diet) soda decreased from 27 percent (451) to 20 percent (343).

The percentage of students who reported excessive screen time (4 hours or more) usage decreased from 19 percent (330) to 12 percent (196).

The percentage of students who reported having 60 minutes or more of physical activity increased from 56 percent (954) to 72 percent (1,211).

Key Items of Evaluation

Balancing Food & Play

Student comments regarding Balancing Food & Play include:

"I'm eating better and exercising more and teaching my little brother about what I've learned."

"My family has been taking more walks together, and I've invited my neighbor to come play outside with me more."

"My family has started cooking healthier meals together."

"I enjoyed learning about how to make a healthy plate."

"I eat more fruits now and drink more milk instead of soda."

"The program was active and fun because we got to play outside and do fun activity pages in the journal."

"Balancing food and play taught me that I need to play more and eat healthier."

V(A). Planned Program (Summary)**Program # 21****1. Name of the Planned Program**

Climate Change

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	20%		20%	
121	Management of Range Resources	30%		30%	
132	Weather and Climate	10%		10%	
205	Plant Management Systems	40%		40%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890

Actual	6.8	0.0	1.7	0.0
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2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
98157	0	107204	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
98157	0	150636	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
613564	0	366972	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Irrigation scheduling requires accurate information regarding current weather conditions as influenced by climate change. Evapotranspiration data is calculated based on current weather conditions and used to manage soil/water resources in the production system. Weather networks collect weather information for processing into decision support information for distribution to clientele. Educational programs increase the knowledge of agricultural producers and facilitates adoption of irrigation management practices to mitigate variation in weather conditions reflecting climate change.

Drought is a devastating part of climate change. A drought of record and prolonged high temperatures caused major crop and forage losses across the eastern and southern regions of the state in 2009. AgriLife Extension responded to this crisis,

interacting with their clientele through a variety of planning and programming efforts. In 2009, AgriLife Extension participated in 132 workshops, planning sessions and other drought programming with Extension clientele documented 25,026 contact hours with 8,111 participants and a total of 723,605 contacts through a variety of outreach technologies. Topics include drought monitoring, planning and management in urban and rural environments for water conservation, livestock, crop and forage management as well as selection and management of landscape species

The drought continued unabated for Central and South Texas until fall rains brought relief. Record breaking heat and drought continued through July and August for much of these regions. On July 21, AgriLife Extension published drought losses estimated by Extension to the agricultural industry which totaled \$3.6 billion in direct losses to agricultural producers, with \$2.6 billion in damage to crop producers and \$974 million attributed to the livestock sector. These estimates brought awareness of the scope of the drought and helped elected leadership funnel help to those affected.

Irrigation in the semi-arid High Plains of Texas reduces risk associated with extreme climate, but water resources are limited. A team of Extension specialists has made a significant difference in the production of silage for the dairies and beef feedlots which produce a large part of the annual income for the High Plains. Through a series of feeding trials and field trials to establish agronomics and nutritional quality, this team discovered and demonstrated that brown midrib sorghum silage has equal feed value to corn silage but uses less than 60% of the water required by corn. At the onset of this program, major feedlots would not purchase sorghum silage. More than 50 educational programs involving more than 4,000 High Plains farmers and feeders have turned this around, with approximately 40,000 acres of sorghum silage planted in 2009. This represents a saving of about \$4.6 million in water pumping costs, more than 425,000 acre inches of water saved and a new economic opportunity for farmers who previously did not have an adequate water supply to grow corn silage.

AgriLife Research

The research response to this pressing issue is to generate reliable, verifiable data regarding carbon sequestration, carbon cycling, and interrelationships of cropping systems, livestock production and climate change. An example of this effort is using carbon dioxide from coal fired power generation as a feedstock for algae production. Research is also ongoing to develop and add value to co-products from algae production.

Additional research focuses on development of models for predicting our total water resources. Current weather conditions influence our soil water, surface water and groundwater resources. As climate changes result in variable weather conditions better decision support systems are needed to predict our available water resources. Remotely sensed realtime data is needed as inputs to these models for prediction soil water, surface water and groundwater availability.

2. Brief description of the target audience

AgriLife Extension

Agricultural producers, crop consultants, researchers, state agencies and federal agencies utilize this information in their production systems and research programs.

AgriLife Research

Industry, researchers, agency staff and water planners can benefit from information developed in the research program.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual	1415	7437	362	0

2. Number of Patent Applications Submitted (Standard Research Output) Patent Applications Submitted

Year: 2009

Plan:

Actual: 0

Patents listed**3. Publications (Standard General Output Measure)****Number of Peer Reviewed Publications**

2009	Extension	Research	Total
Plan			
Actual	0	33	33

V(F). State Defined Outputs**Output Target****Output #1****Output Measure**

- # research related projects.

Year	Target	Actual
2009	{No Data Entered}	3

Output #2**Output Measure**

- # of educational sessions conducted.

Year	Target	Actual
2009	{No Data Entered}	74

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Irrigation Training Program - % Adoption of best practices.
2	Evapotranspiration Information for Clientele - Dissemination of Recommendations

Outcome #1**1. Outcome Measures**

Irrigation Training Program - % Adoption of best practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	51

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Irrigation remains a high priority issue for Texas. Irrigation training is needed covering both basic and advanced irrigation topics. Educational resources are needed to address irrigated production agriculture. The educational resources should cover engineering, economics and agronomic issues associated with irrigation. These resources can also meet the training needs of Extension Agents within Texas AgriLife Extension Service.

What has been done

Irrigation training events were held in Amarillo, January 14, 2009 and Hondo, January 20, 2009. These training events were coordinated with local groundwater conservation districts and the irrigation industry.

Results

The irrigation training event held in Hondo had 129 participants while the Amarillo event had 133 participants. The participants were very impressed with the scope of topics and comprehensive nature of the resources contained in the training materials. An evaluation survey indicated 62% of the survey respondents reported knowledge gained while 51% indicated a willingness to adopt best management practices discussed during the training events.

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

Outcome #2**1. Outcome Measures**

Evapotranspiration Information for Clientele - Dissemination of Recommendations

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	470000

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Agricultural producers need accurate information for implementing irrigation scheduling. A weather station network is maintained to collect weather conditions for calculating ET and providing decision support for irrigation scheduling.

What has been done

The Texas High Plains Evapotranspiration Network (TXHPET) system and automated listserv continued to provide advanced, updated, standardized, precision irrigation scheduling and meteorological data on a daily basis throughout FY09. Data and information support were provided for at least 20 federal and state agency research and extension projects. Texas AgriLife Research and Extension at Amarillo, Lubbock, Vernon, Chillicothe, Uvalde, Temple and College Station, the USDA-ARS at Bushland, and West Texas A&M University at Canyon used TXHPET data for research, extension and teaching; applications included meteorological modeling inputs, crop modeling, irrigation scheduling and water resources management.

Results

The TXHPET database, web site <http://txhighplainset.tamu.edu/>, and associated tools were promoted at producer meetings, county agent training events, Master Gardener classes and other educational events. Through fax (200+ subscribers to daily fax service) and electronic information delivery (600 e-mail listserv and web site downloads daily), TXHPET provides relevant data to promote efficient irrigation management to a variety of clientele. In 2008 and again in 2009, the TXHPET Network disseminated nearly 470,000 pages of irrigation scheduling data; this represented an increase of 170,000 over the previous year, and reflects significant increase in application of the information. The TexasET network, <http://texaset.tamu.edu> distributes approximately 465 automatic emails with watering recommendations each week. These two networks cover a fairly large area of the state, and cover most of the irrigated acreage.

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)

Brief Explanation

Conditions such as drought, and other natural disasters and weather related events can have an impact on this area.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

Irrigation remains a high priority issue for Texas. Irrigation training is needed covering both basic and advanced irrigation topics. Educational resources are needed to address irrigated production agriculture. The educational resources should cover engineering, economics and agronomic issues associated with irrigation. These resources can also meet the training needs of Extension Agents within Texas AgriLife Extension Service. The irrigation training event held in Hondo, TX on January 20, 2009 had 129 participants while the Amarillo event held on January 14, 2009 had 133 participants. The participants were very impressed with the scope of topics and comprehensive nature of the resources contained in the training materials.

Key Items of Evaluation

The irrigation training program evaluation survey indicated 62% of the survey respondents reported knowledge gained while 51% indicated a willingness to adopt best management practices discussed during the training events.

V(A). Planned Program (Summary)**Program # 22****1. Name of the Planned Program**

Sustainable Energy

V(B). Program Knowledge Area(s)**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	20%		60%	
205	Plant Management Systems	50%		10%	
402	Engineering Systems and Equipment	30%		30%	
	Total	100%		100%	

V(C). Planned Program (Inputs)**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2009	Extension		Research	
	1862	1890	1862	1890

Actual	2.3	0.0	0.2	0.0
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2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
8725	0	357	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
8725	0	90391	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
54539	0	266884	0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Agricultural producers and the energy industry have a keen interest in the role that agriculture will play in contributing to renewable energy for America, and are looking to AgriLife Extension to help define which second generation crops will fit this market and how they will be produced. Texas is a major livestock feeding state and faces a feed grain deficit at current production levels, making second-generation crops the only practical feedstocks for bioenergy. AgriLife Extension has responded by applied research and demonstrations of candidate oilseed and lignocellulosic feedstock crops; holding workshops and field days for agricultural producers, by meeting with commercial interests from the energy sector to interpret potential for a variety of plant based bioenergy options. As crop-based bioenergy other than the traditional ethanol from feed grains is still in its infancy, actual adoption of second-generation bioenergy is limited.

Research involved the development of cropping system BMPs, testing and development of novel dedicated oilseeds and lignocellulosic bioenergy crops, advanced plant breeding systems, micro- and macro-algae, logistics and conversion technologies. Our focus is on second-generation oilseeds and lignocellulosic feedstocks rather than on corn, soybeans, and other crops that can be used for food and feed. Drought and salinity tolerance, adaptation to marginal growing conditions and wide hybridization are emphasized in research in order to increase adaptation and sustainability of alternative energy systems

2. Brief description of the target audience

The target audience includes petroleum-based energy companies, start up companies with an interest in bioenergy including logistics, genetics, microorganisms to enhance the digestion of lignocellulosic feedstock and other assorted interests, crop genetics companies, agricultural producers, electric generating companies, and the general public.

V(E). Planned Program (Outputs)

1. Standard output measures

2009	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual	160	0	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2009

Plan:

Actual: 2

Patents listed

* Transformation of Glycerol and Cellulosic Materials into High Energy Fuels

* Aqueous Treatment System and Process Using a Hybrid Reactive Solid/Secondary Reagent Reactor

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2009	Extension	Research	Total
Plan			
Actual	0	19	19

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- # research related projects.

Year	Target	Actual
2009	{No Data Entered}	5

V(G). State Defined Outcomes**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Texas Animal Manure Management Issues Conference - % Understanding.
2	Oilseed workshops - % Knowledge gained.

Outcome #1**1. Outcome Measures**

Texas Animal Manure Management Issues Conference - % Understanding.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	78

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Manure generated in a confined animal feeding operation (CAFO) is a potential bioenergy source. CAFO operators and managers must understand the potential value of this energy source and implement best management practices to harvest a quality manure capable of being used for energy production.

What has been done

The State-wide Texas Animal Manure Management Issues Conference was held in Round Rock on September 29-30, 2009. The two-day program included keynote speeches on what animal industry and regulatory community need to ensure a viable animal industry and effective environmental protection. Conference was attended by nearly 160 people including producers, commodity group executives, engineers, scientists, students, consultants, regulators, reporters and emergency responders. One technical session within the conference discussed advanced manure conversion: bioenergy

Results

Presentations in the session covered topics of combustion-fuel properties of manure or compost from paved vs. unpaved cattle feedlots, animal manure and other biomass residue conversion into useful energy via fluidized bed gasification, and gasification of animal manure - effective use of a valuable commodity. Respondents to the evaluation document rated their increase in understanding of the topic at 7.05 on a 9 - point scale.

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment

Outcome #2**1. Outcome Measures**

Oilseed workshops - % Knowledge gained.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2009	{No Data Entered}	61

3c. Qualitative Outcome or Impact Statement**Issue (Who cares and Why)**

Biodiesel from plant derived oils will be an important part of the transportation fuel of the U.S. Approximately 20% of all liquid motor fuel is currently diesel. Currently, the U.S. biodiesel industry is largely based on soybean oil, which is an important food and is priced at levels not competitive with petroleum diesel. The development and deployment of production systems with high oil yielding crops has the potential to make US biodiesel a sustainable option.

What has been done

Three oilseed workshops were held (Corpus Christi, Plainview and Wichita Falls) to educate Texas farmers on the potential for producing high yield oilseeds for feedstock for biodiesel.

Results

An overall assessment of knowledge gained indicated that workshop attendees increased knowledge of oilseed production, risk management and the economics of production by 61%. The economic impact of the workshop is difficult to quantify because we were only providing information to the clientele so that they could make an educated decision on producing and marketing oil-seed crops and mitigate risks associated with their farming operation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
201	Plant Genome, Genetics, and Genetic Mechanisms
205	Plant Management Systems

V(H). Planned Program (External Factors)**External factors which affected outcomes**

- Natural Disasters (drought, weather extremes, etc.)
- Appropriations changes

Brief Explanation

An exceptional drought and abnormally high temperatures impacted bioenergy crops in south, southwest, central and the Gulf Coast regions of Texas in 2009. Record high temperatures and drought were widespread.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- Before-After (before and after program)

Evaluation Results

There remains a great deal of media play and information on oil-seed crops and the economic potential. However, much of this information is not relevant to Texas farms and can be misleading to clientele. Three Oil-seed Workshops that were conducted at Corpus Christi, Plainview, and Wichita Falls to provide producers, crop consultants, and agency employees with the information necessary (risk management, economics, and production information) to make decisions on selecting, growing, and marketing oil-seed crops. The oil-seed workshops were fully funded by a Southern Regional Risk Management Education grant. Average knowledge gain across all topics was a 61% increase. The economic impact of the workshop is difficult to quantify because we were only providing information to the clientele so that they could make an educated decision on producing and marketing oil-seed crops and mitigate risks associated with their farming operation.

Key Items of Evaluation

Manure generated in a confined animal feeding operation (CAFO) is a potential bioenergy source. CAFO operators and managers must understand the potential value of this energy source and implement best management practices to harvest a quality manure capable of being used for energy production. The State-wide Texas Animal Manure Management Issues Conference was held in Round Rock on September 29-30, 2009. Presentations in the session covered topics of combustion-fuel properties of manure or compost from paved vs. unpaved cattle feedlots, animal manure and other biomass residue conversion into useful energy via fluidized bed gasification, and gasification of animal manure - effective use of a valuable commodity. Respondents to the evaluation document rated their increase in understanding of the topic at 7.05 on a 9 - point scale.